

Radiometric Dating

First here are three published studies that show that the Bible and archaeological studies using radiometric dating techniques agree!

San Francisco Chronicle

A judgment about Solomon Evidence supports Hebrew kingdoms in biblical times

David Perlman, Chronicle Science Editor



Deep in the ruins of a Hebrew town sacked nearly 3,000 years ago by an Egyptian Pharaoh, scientists say they have discovered new evidence for the real-life existence of the Bible's legendary kingdoms of David and Solomon.

The evidence refutes recent claims by other researchers who insist that the biblical monarchs were merely mythic characters, created by scholars and scribes of antiquity who made up the tales long after the events to buttress their own morality lessons.

The debate, however, is not likely to subside, for archaeology is a field notable for its lengthy quarrels among partisans, however scientific they may be.

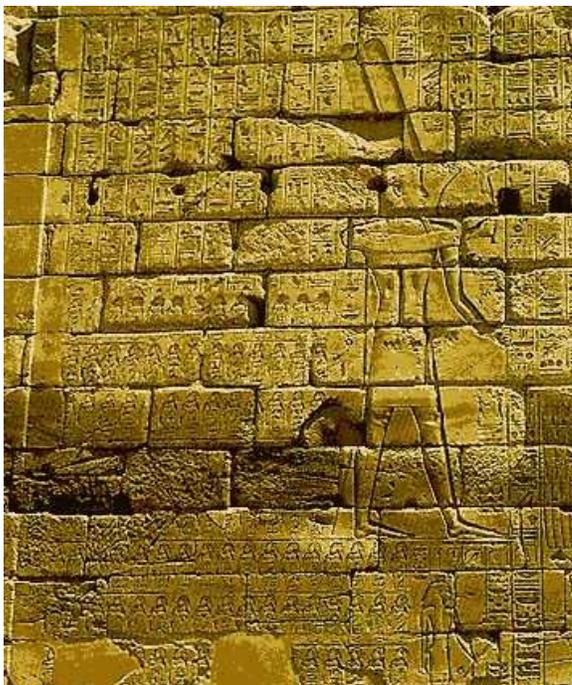
The latest evidence comes from Israeli and Dutch archaeologists and physicists after seven years of digging at a historic site called Tel Rehov. The site is in the Jordan valley of Israel, where successive settlements rose and fell over the centuries.

Using highly sophisticated techniques for establishing dates through the decay rate of radioactive carbon, the scientists have pinned down the time of a disputed moment in history, recorded in the Bible, when a Pharaoh now known as Shoshenq I invaded Jerusalem.

As the book of Chronicles relates in the Old Testament, Shoshenq (the Bible called him Shishak) came "with twelve hundred chariots and threescore thousand horsemen" and plundered Israel's capital, as well as such towns and

fortresses as Rehov, Megiddo and Hazor.

The Pharaoh later listed those conquests on a monument in the temple of Amun at Karnak, where the Egyptian city of Luxor now stands.



- 11=Gaza, Genesis 10:19, Joshua 10:41
- 12=Makkedah, Joshua 10:10
- 13=Rubuti,
- 14=Aijalon, Joshua 21:24
- 15=Kiriathaim?,
- 16=Beth- horon, Joshua 10:10
- 17=Gibeon, Joshua 9:3
- 18=Mahanaim, Genesis 32:2, Joshua 13:26
- 19=Shaud[y],
- 20=?,
- 21=Adoraim, 2 Chronicles 11:9
- 22=Hapharaim, Joshua 19:9



23=Rehov, Numbers 13:21, Joshua 19:28

24=Betshan,

25= Shunem, Joshua 19:18

26=Taanach, Joshua 12:21

27=Megiddo, Joshua 12:21

28=Adar, Joshua 15:3

29=Yadhamelek,

(List and second photo from <http://www.specialtyinterests.net/sheshonk.html>)

The new timetable places Shoshenq's rampage and looting at Rehov in the 10th century rather than the 9th, a highly significant difference. It sets the date at about 925 B.C., some five years after Solomon was said to have died, and some 80 years earlier than other archaeologists maintain.

Those scholars, known in the world of archaeology as "minimalists," insist that both David and Solomon were little more than tribal chieftains, and certainly not the mighty monarchs of the Bible.

A report on the new evidence appears today in the journal *Science* by Hendrik Bruins, a desert researcher at Ben-Gurion University of the Negev in Israel, Johannes van der Plicht of the Center for Isotope Research at the University of Groningen in the Netherlands, and Amihai Mazar of the Hebrew University of Jerusalem, the principal archaeologist at Tel Rehov.

In a telephone interview, Mazar said that one specific "layer of destruction" at the site yielded a harvest of charred grain seeds and olive pits that enabled his colleagues to date them with an unusually high level of precision. The dates of both earlier and later layers showed clearly how the successive layers of occupation could be determined from the 12th through the 9th centuries B.C., he said.

"They provide a precise archaeological anchor for the united monarchies of the time of David and Solomon," Mazar said. "The pottery we found there also tells us that the conquest dates from the same period as Megiddo, when its mighty gates and walls and temples were also destroyed by Shoshenq's armies."

More than 40 years ago the late Yigael Yadin, who won fame as an army officer during Israel's war for independence, turned to archaeology and after excavating the imposing ruins at Megiddo maintained that they were in fact destroyed during the so-called Solomonic period.

Recently, however, a group of archaeologists led by Israel Finkelstein of Tel Aviv University working at Megiddo has insisted that the so-called Solomon's gate there dates from a much later time -- perhaps 100 or even 200 years after Solomon.

Finkelstein read a copy of the Mazar report that was sent him by e-mail. After replying that Mazar "is a fine scholar," he insisted that "there are many problems with his archaeological data" and that the samples of material used for the radiocarbon dating are at best questionable.

In the past, Finkelstein has accused Mazar of harboring a "sentimental, somewhat romantic approach to the archaeology of the Iron Age," according to an earlier account in *Science*.

On Thursday, however, one of the leaders in the archaeology of Israel, Professor Lawrence E. Stager, who is director of Harvard University's Semitic Museum, dismissed the claims of Finkelstein and the other archaeologists who share his views.

"Mazar and his colleagues have now put another nail in the coffin of Finkelstein's theories," Stager said. "There's no question that Rehov and the other cities that Shoshenq conquered were indeed there at the time of Solomon."

"We don't need to rely any more only on the Bible or on Shoshenq's inscriptions at Karnak to establish that Solomon and his kingdom really existed, because we now have the superb evidence of the radiocarbon dates."

copied from <http://sfgate.com/cgi-bin/article.cgi?f=/c/a/2003/04/11/MN24970.DTL>

Radio-dating backs up biblical text

11 September 2003

HELEN R. PILCHER

An ancient waterway, described in the Bible, has been located and radiocarbon-dated to around 700 BC¹.

The half-kilometre Siloam Tunnel still carries water from the Gihon Spring into Jerusalem's ancient city of David. According to verses in Kings 2 and Chronicles 2², it was built during the reign of the King Hezekiah - between 727 BC and 698 BC - to protect the city's water supply against an imminent Assyrian siege. Critics argue that a stone inscription close to the exit dates the tunnel at around 2 BC.



The 500 meter-long tunnel still carries water to the city of David

© BiblePlaces.com

To solve the conundrum, geologist Amos Frumkin, of the Hebrew University of Jerusalem, and colleagues looked at the decay of radioactive elements - such as carbon in plants and thorium in stalactites - in tunnel samples.

The plaster lining the tunnel was laid down around 700 BC, says Frumkin's team. A plant trapped inside the waterproof layer clocked in at 700-800 BC, whereas a stalactite formed around 400 BC. "The plant must have been growing before the tunnel was excavated; the stalactite grew after it was excavated," explains Frumkin.

The study "makes the tunnel's age certain", says archaeologist Henrik Bruins of Ben-Gurion University of the Negev, Israel. The Siloam Tunnel is now the best-dated Iron Age biblical structure so far identified.

The remains of buildings and structures described in the Bible are notoriously difficult to find. Specimens are rare, poorly preserved, hard to identify and often troublesome to access. Says James Jones, Bishop of Liverpool, UK: "This scientific verification of historical details in the Bible challenges those who do not wish to take it seriously."

Tunnel vision

The samples also help to explain how the tunnel was built. The passage is sealed with layers of plaster, the deepest and oldest of which is directly above the bedrock, with no sediment between. This shows that the plaster was applied immediately after the tunnel was built, Frumkin says.

"It's also quite unique to find well-preserved plant remains in plaster," says Bruins. Workers may have made up huge quantities outside the tunnel, where the plants could have become mixed in, and then taken it inside.

Large enough to walk inside, the Siloam Tunnel zigzags through an ancient hill. Its carved inscription describes how two teams of men, starting on opposite sides of the mountain, managed to meet in the middle. They may have followed a natural fissure in the limestone rock, Bruin suggests.

Unusually, the inscription does not name King Hezekiah - other monarchs commonly boasted of their architectural achievements in stone. The carving is six metres inside the tunnel, so it must have been made by lamplight.

"It wasn't meant to be seen by the public," says Biblical historian Andrew Millard of Liverpool University, UK. "I think it was the workmen recording what an extraordinary feat they had accomplished."

It's quite unique to find well-preserved plant remains in plaster
Henrik Bruins
Ben-Gurion University

References

1. Frumkin, A., Shimron, A. & Rosenbaum, J. Radiometric dating of the Siloam Tunnel, Jerusalem. *Nature*, **425**, 169 - 171, (2003). [\[Article\]](#)
2. 2 Kings 20:20; 2 Chronicles 32:3,4.

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copied from <http://www.nature.com/nsu/030908/030908-9.html>

Archaeological Discovery Sheds Light on the Mystery of Shiloh

An uncovered broken clay pitcher embedded in a layer of reddish ashes completes the story of the devastation of Shiloh.

By: Aryeh Savir, Tazpit News Agency

Published: January 10th, 2013



Tel Shiloh (Photo Credit: Tazpit News Agency)

Recent archaeological findings in Samaria shed light on the incomplete story of the destruction of Shiloh, the ancient capital of Israel.

An uncovered broken clay pitcher embedded in a layer of reddish ashes completes the story of the devastation of Shiloh, where the Mishkan, the Tabernacle, was placed during the period of the Judges, and essentially served as Israel's capital during the early part of the First Israelite commonwealth.

Shiloh served as the spiritual center of Israel for 369 years until its destruction. The Bible does not inform us of the story of its ruin, but these archaeological discoveries shed light on the capital's tragic demise.

The book of Samuel tells us of a battle between the Philistines and the Israelites, during which the Philistines prevailed, and during which the Holy Ark was captured by them. After hearing the news of the defeat from a messenger, Eli the High Priest, the leader of his time, who lost his two sons in the battle, fell back and died. This is all we learn of the defeat from the Book of Samuel.

We know that Shiloh was destroyed shortly thereafter. We know from the book of Jeremiah that Shiloh was destroyed by the Philistines. These new archaeological findings tell us of how it happened. After the battle, which took place at Even Ha'ezel, near modern day Rosh Ha'ayin, the Philistines moved on to destroy Shiloh, the capital. The ashes found attest to a devastating fire that occurred at the site. **The dating of the clay pitcher, 1,050 BCE, correlates with the dating of the events depicted in Book of Samuel.**

Avital Selah, director of the Tel Shiloh site, told Tazpit News Agency that these findings were discovered during a massive dig of the Tel Shiloh site, in which some 1000 youth volunteers from across Israel participated. Similar findings were discovered thirty years ago, including food leftovers, and their dating is also set at 1,050 BCE, but the recently discovered layer of ashes completes the story regarding the story of the destruction of the ancient Israelite capital of Shiloh.

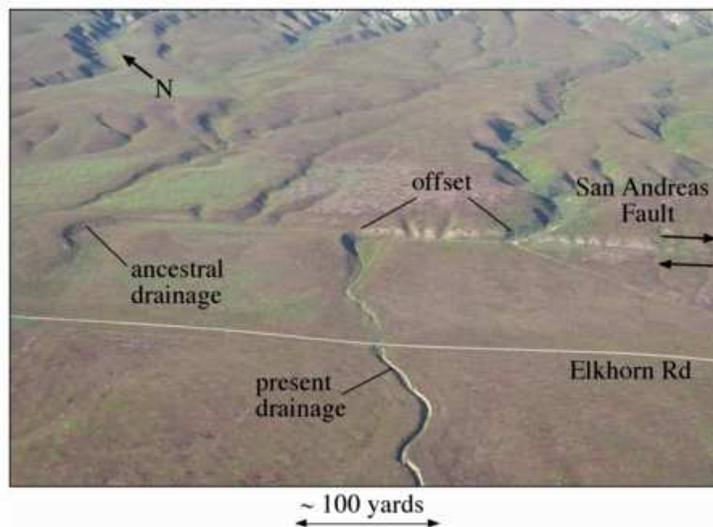
from <http://www.jewishpress.com/news/breaking-news/archaeological-discovery-sheds-light-on-the-mystery-of-shiloh/2013/01/10/?src=ataglan>

Next lets leave Israel and go to a very infamous California location, the San Andreas Fault.

Two professors at California Universities have studied movement of the fault at Wallace Creek, they are

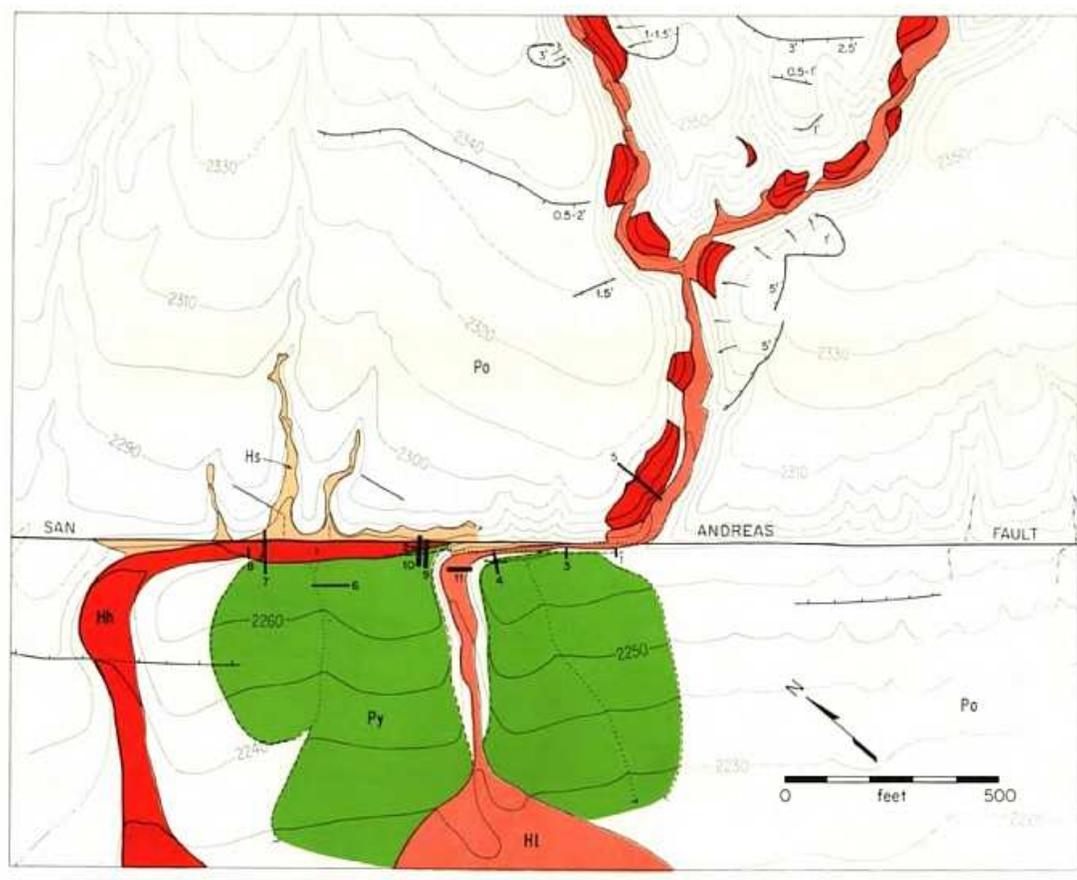
KERRY E. SIEH Division of Geological and Planetary Sciences, 170-25 California Institute of Technology, Pasadena, California 91125
RICHARD H. JAHNS School of Earth Sciences, Stanford University, Stanford, California 94305*

Here is an aerial photo of the location.



Notice the offset in the creek along the fault line and then further to the left is the remains of an ancestral creek bed that at one time was where it flowed. The movement of the fault has shifted the creek about 150 yards where the present creek flows and at one time it flowed down the ancestral bed that has shifted about 420 yards.

Here is a colored diagram of the creek beds, present and past.



What the researchers did was dig trenches at strategic locations across the creek beds and took organic material from them and dated them by the carbon-14 dating method. What they are interested in is finding at what rate the fault have shifted in the past. Their results indicate that the average rate of slip along the San Andreas fault has been **33.9 ± 2.9 mm/yr for the past 3,700 yr and 35.8 ± 5.4 mm/yr for the past 13,250 yr.** (The slip rate results have been verified by another research team at a location a little further down the fault on another stream, 18 km away at the Van Matre Ranch.)

So what does this mean to us?

3,700 years ago is only a little before the times of the first examples of using radiometric dating to verify the timing of Biblical events and there is no reason why this data should be any less reliable than the first examples!

That fact that you can easily see both the present creek bed and the ancestral creek bed indicate that there has been no massive floods in that area to destroy the evidences we easily see!

Therefore there is no reason that both the 3,700 and the 13,250 yr. dates are not valid !!

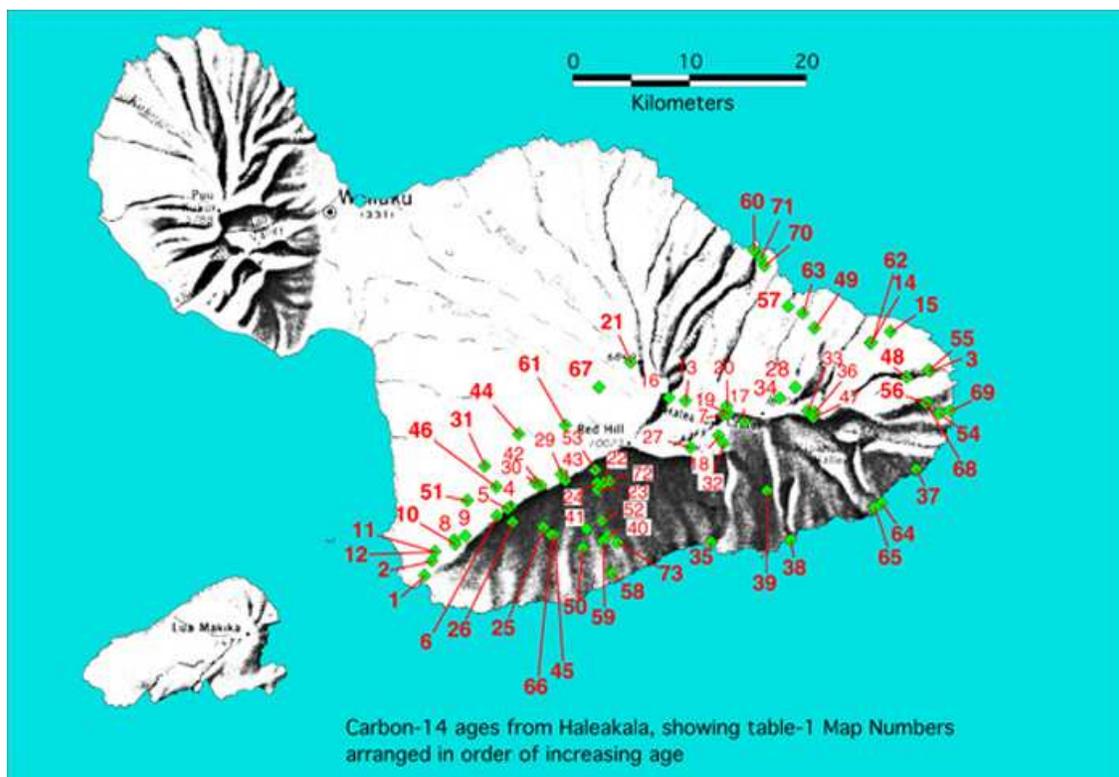
Next let us go to the famous resort island of Maui !!

Our government, USGS, has done considerable research on the massive volcano on Maui. They have climbed all over the volcano and obtained carbonized vegetation root samples for radiometric dating. The following photo shows an example of how they do it.



Digging into the soil buried by a lava flow they find charcoalized vegetation roots for radiocarbon dating. Charcoal from this hole site under and at the edge of a young flow yielded an age of 970 ± 40 years.

This diagram shows where on the volcano they have obtained carbonized root samples.



Here are the results.

- 1 390 ± 50 SWR Younger La Perouse lava at Pu`u Kanaloa S99-HC678 this publication
- 2 460 ± 50 SWR Younger La Perouse beneath spatter at Kalua o Lapa FAT-99-04d this publication
- 3 490 ± 70 Hana Kawaipapa or "landfill" lava W4560 4
- 4 510 ± 60 SWR Young fissure riven through Pu`u Makua FAT-96-29 2
- 5 590 ± 120 SWR Young fissure riven through Pu`u Makua -- 8
- 6 650 ± 140 SWR Fissure at Keonehunehune -- 8
- 7 870 ± 40 HC Hanakauhi lava from a north-wall fissure S97-HC232c 9
- 8 600 ± 300 SWR Probably Mahoe keiki lava; location unspecified -- 5
- 9 890 ± 170 SWR Mahoe keiki lava -- 8
- 10 920 ± 70 SWR Mahoe keiki lava W4297 4
- 11 910 ± 40 SWR Mauka flow "1790" S99-HC688d this publication
- 12 950 ± 40 SWR Mauka flow "1790" S99-HC688b this publication
- 13 940 ± 50 HC Halali`i S97-HC137 9
- 14 960 ± 50 Hana Pu`u Hina`i lava S00-HC1438 this publication
- 15 960 ± 40 Hana Ka`eleku (Hana airport lava flow) S01-HC1731 this publication
- 16 970 ± 50 HC Holua lava from Pu`u o ka `O`o S97-HC63c 9
- 17 1040 ± 40 HC Kalua Awa lava S97-HC152 9
- 18 1160 ± 50 HC Pu`u Nole lava S97-HC209 9

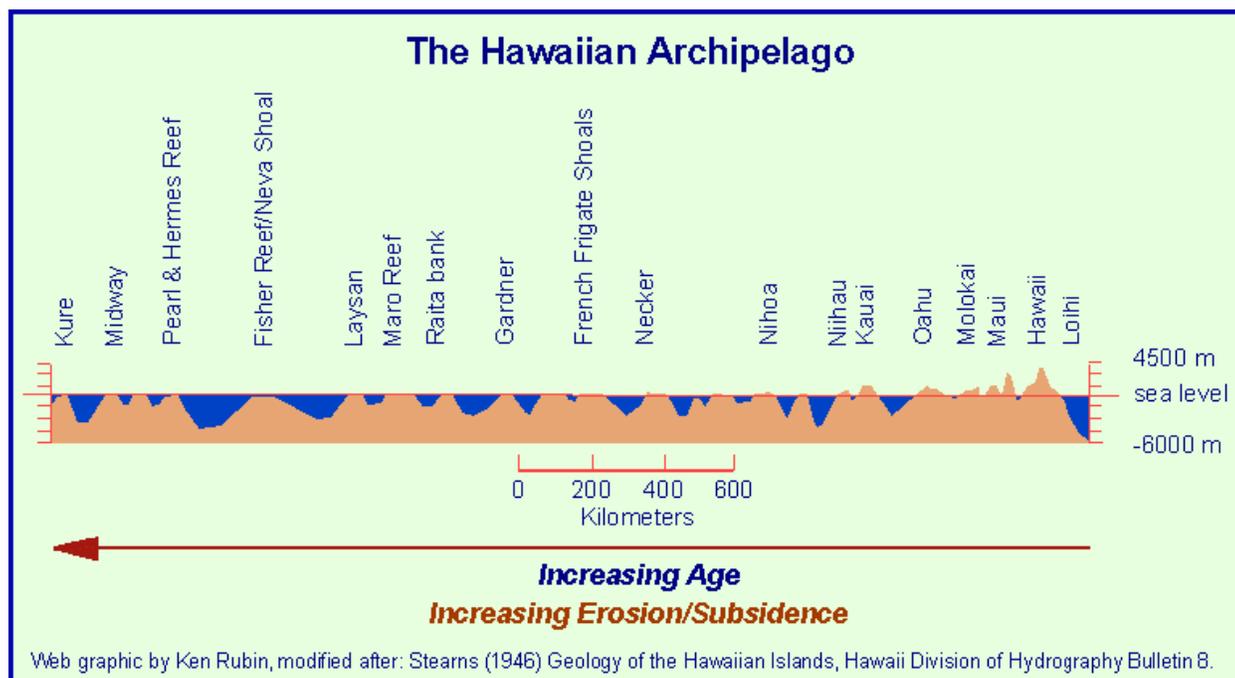
19 1870±40 HC Explosion crater S97-HC242 9
 20 2340±40 HC Lava draping North crater wall vent on Kalapawili Ridge S01-HC1810B this publication
 21 2530±50 HC Tephra collected on west flank; from within-crater vent W4554 4
 22 3000±60 SWR Lava flow adjacent to east flank of Kahua cone FAT-96-11 2
 23 3015±65 SWR Kamole Gulch lava downslope from Kahua cone BEM-176 2
 24 3070±60 SWR Kamole Gulch lava adjacent to Kahua cone FAT-96-18 2
 25 3090±30 SWR Auwahi lava (Giant tumulus lava) S01-HC1620B this publication
 26 3540±40 SWR post-Makua lava collected near Pu`u `Ouli BEM-235b 2
 27 3750±50 HC Tephra at foot of south crater wall S97-HC129 9
 28 3850±50 ER Wai`ele`ele lava from cone east of Wai Anapanapa FAT-94-01 this publication
 29 3890±40 SWR SWR ridgeline vent charcoal in roadcut S99-HC936 this publication
 30 3900±60 SWR Kamaole eruption from vent at hairpin above Polipoli W4314 4
 31 4070±90 SWR Kamaole lava downslope W4561 4
 32 4070±50 HC Pu`u Maile S97-HC64c 9
 33 4160±40 ER Silversword Gulch (informally named by NPS) S01-HC1784B this publication
 34 4210±40 ER East Camp cinder cone S01-HC1792 this publication
 35 4530±40 Kaupo Hawelewele Gulch 100-ft elevation S98-HC531 this publication
 36 5020±40 ER Silversword Gulch (informally named by NPS) S01-HC1786 this publication
 37 6710±40 Hana Muolea area highway roadcut S99-HC1067 this publication
 38 7810±40 Kaupo Lava beneath Lo`alo`a 370 m NE of Kepio Pt S98-HC597c this publication
 39 7980±40 Kaupo Lo`alo`a ankaramite 3080-ft S98-HC589 this publication
 40 8160±40 SWR Kanahau ankaramite S00-HC1574 this publication
 41 8180±40 SWR Kanahau lava ? S01-1627B this publication
 42 8170±40 SWR SWR ridgeline vent beneath spatter in gully exposure S99-HC925 this publication
 43 8190±60 SWR Upper flank aphyric lava FAT-96-23 2
 44 8650±90 SWR Waiohuli lava W4557 4
 45 8710±40 SWR Lava from vent west of Kanahau S01-HC1604 this publication
 46 8830±50 SWR North of Ulupalakua unit hpa of Bergmanis BEM-215 2
 47 9400±300 ER Cinder cone near head of Kipahulu Valley W3945 4
 48 9500±40 Hana From upper Kawaipapa Gulch S99-HC1123 this publication
 49 9520±70 Nahiku Kuhiwa basanite S00-HC1414B this publication
 50 10120±40 SWR Aphyric lava that inundated Manukani S01-HC1594 this publication
 51 10290±50 SWR NW flank flow unit hkea of Bergmanis BEM-214 2
 52 10440±60 SWR Upper south flank east of Kahua cone FAT-96-14 2
 53 10470±50 SWR Small fissure eruption upslope of Kahua cone S99-HC803 this publication
 54 12760±120 Hana Haneo`o ankaramite W4754 4
 55 12760±50 Hana Lower Kawaipapa Gulch S bank of plunge pool S99-HC1078 this publication
 56 13450±50 Hana Mo`omo`onui Gulch upsection from HC1106 S99-HC1105B this publication
 57 16720±110 Nahiku Pa`akea lava roadcut at Three Bridges S00-HC1339 this publication
 58 17010±50 SWR Nawini ankaramite S00-HC1532AB this publication
 59 17230±50 SWR Nawini ankaramite S00-HC1579 this publication
 60 17860±60 Keanae Pi`ina`au lava Keanae S01-HC1668B this publication
 61 22550±400 SWR West-flank tephra Waipoli Road W4004 4
 62 22770±220 Hana Paki lava S00-HC1436B this publication
 63 23530±200 Nahiku Nahiku (Mossman) ankaramite S00-HC1401 this publication
 64 23820±90 Kipahulu Palikea ankaramite in low seacliff SW of Kuloa Pt S99-HC962A this publication
 65 24170±80 Kipahulu Kekue Bay S99-HC1119 this publication
 66 25790±100 SWR Nini`ali`i lava west of Luaia`ilua Hills S01-HC1760 this publication
 67 26800±400 SWR West-flank tephra Waipoli Road W4315 4
 68 34100±290 Hana Mo`omo`onui Gulch 500 ft downsection from HC1105 S99-HC1106B this publication
 69 37150±410 Hana Pu`u Kolo(?) lava at Ka Iwi o Pele S99-HC1127 this publication
 70 39920±400 Ke`anae `Ohi`a lava S01-HC1729C this publication
 71 43800±1400 Keanae Pi`ina`au lava (caps conglomerate) Keanae S98-HC310 9
 72 45000±1800 SWR Upper south flank east of Kahua cone FAT-96-13 2
 73 52900±1800 SWR Kahua lava; source vent uncertain S00-HC1524A this publication

So what does this mean to us ??

Scanning down the results starting at 390 years ago you will see a smooth progression to the end with the top value.

This smooth progression indicates that there has been no massive flood here to cause the data to become invalid!

Here is a diagram showing the amazing Hawaiian Archipelago and how the latest formed volcanoes to the right have peaks above sea level and as you proceed to the left the peaks have been worn down to sea level and below by the action of the sea indicating the great age of these volcanoes!



Well we could give many more examples to illustrate the age of the earth, but lets close this out for now !!

We obviously believe we have demonstrated that radiometric dating methods are valid and show that the earth is of great age and that there has been no great flood that completely reworked the surface of the total planet !!!

Here is a copy of <http://www.godandscience.org/apologetics/localflood.html> "The Genesis Flood, Why the Bible Says it Must be Local"

Evidence for God from Science: Christian Apologetics

The Genesis Flood

Why the Bible Says It Must be Local

by Rich Deem

Introduction

The Bible says the flood was global?

"The Bible says it. I believe it. That settles it!" The phrase is a common argument used for those who call for the "literal reading" of the Bible. I have no complaints against reading the Bible literally. However, many who claim to be literalists apparently do not believe everything the Bible says. Creation passages clearly say that God caused the original global seas to be restricted - never to cover the entire earth again. The Genesis flood passage itself says that the water covered "the entire earth" even though Noah could see the distant mountains, indicating that the "earth" was just the entire land of Mesopotamia.

Many Christians maintain that the Bible says that the flood account of Genesis requires an interpretation that states that the waters of the flood covered the entire earth. If you read our English Bibles, you will probably come to this conclusion if you don't read the text too closely and if you fail to consider the rest of your Bible. Like most other Genesis stories, the flood account is found in more places than just Genesis. A careful reading Psalm 104 directly eliminates any possibility of the flood being global. In order to accept a global flood, you must reject Psalm 104 and the inerrancy of the Bible.

The Bible's other creation passages eliminate the possibility of a global flood

The concept of a global Genesis flood can be easily eliminated from a plain reading of Psalm 104, which is known as the "creation psalm." Psalm 104 describes the creation of the earth in the same order as that seen in Genesis 1 (with a few more details added). It begins with an expanding universe model (reminiscent of the Big Bang, (verse 2) parallel to Genesis 1:1). It next describes the formation of a stable water cycle (verses 3-5,¹ parallel to Genesis 1:6-8). The earth is then described as a planet completely covered with water (verse 6, parallel to Genesis 1:9). God then causes the dry land to appear (verses 7-8,¹ parallel to Genesis 1:9-10). The verse that eliminates a global flood follows: "You set a boundary they [the waters] cannot cross; never again will they cover the earth." (Psalm 104:9)¹ Obviously, if the waters never again covered the earth, then the flood must have been local. Psalm 104 is just one of several creation passages that indicate that God prevented the seas from covering the entire earth.² An integration of all flood and creation passages clearly indicates that the Genesis flood was local in geographic extent.

The Bible says water covered the whole earth... Really?

When you read an English translation of the biblical account of the flood, you will undoubtedly notice many words and verses that seem to suggest that the waters covered all of planet earth.³ However, one should note that today we look at everything from a global perspective, whereas the Bible nearly always refers to local geography. You may not be able to determine this fact from our English translations, so we will look at the original Hebrew, which is the word of God. The Hebrew words which are translated as "whole earth" or "all the earth" are *kol* (Strong's number H3605), which means "all," and *erets* (Strong's number H776), which means "earth," "land," "country," or "ground."⁴ We don't need to look very far in Genesis (Genesis 2) before we find the Hebrew words *kol erets*.

- The name of the first is Pishon; it flows around the whole [*kol*] land [*erets*] of Havilah, where there is gold. (Genesis 2:11)
- And the name of the second river is Gihon; it flows around the whole [*kol*] land [*erets*] of Cush. (Genesis 2:13)

Obviously, the description of *kol erets* is modified by the name of the land, indicating a local area from the context. In fact, the term *kol erets* is nearly always used in the Old Testament to describe a local area of land, instead of our entire planet.⁵

The "whole earth" often refers to the people not geography

However, there are many more examples of where *kol erets* is used without reference to any specific land, although the context clearly indicates a local area. For example, in Genesis 11 (the Tower of Babel) the text says, "the whole [*kol*] earth [*erets*] used the same language."⁶ We know that this reference is not really to the earth at all (and certainly not to the "whole earth"), but to the people of the earth, who all lived in one geographic location. It wasn't until later that God scattered the people over the face of the earth.⁶ There are many other examples of where *kol erets* actually refers to people rather than the geography of the "whole earth":

- Shall not the Judge of all [*kol*] the earth [*erets*] deal justly?" (Genesis 18:25) (God judges the people of the earth, not the earth itself)
- Now behold, today I am going the way of all [*kol*] the earth [*erets*], and you know in all your hearts and in all your souls that not one word of all the good words which the LORD your God spoke concerning you has failed; all have been fulfilled for you, not one of them has failed. (Joshua 23:14) (Joshua was going the way of all people in the earth, whose ultimate destiny is death.)
- And all [*kol*] the people of the land [*erets*] entered the forest, and there was honey on the ground. (1 Samuel 14:25) (The words "the people of" are added to the English, since they are not found in the Hebrew. The actual translation would be "all the land entered the forest," obviously referring to the people and not to the land itself moving into the forest.)
- While all [*kol*] the country [*erets*] was weeping with a loud voice, all the people passed over. (2 Samuel 15:23) (Obviously, the earth cannot weep with a loud voice.)
- "I am going the way of all [*kol*] the earth [*erets*]. Be strong, therefore, and show yourself a man. (1 Kings 2:2) (David was going the way of all people in the earth, whose ultimate destiny is death.)
- He is the LORD our God; His judgments are in all [*kol*] the earth [*erets*]. (1 Chronicles 16:14) (Judgments are done against people, not the planet)
- Sing to the LORD, all [*kol*] the earth [*erets*]; Proclaim good tidings of His salvation from day to day. (1 Chronicles 16:23) (The people sing, not the planet)
- Tremble before Him, all [*kol*] the earth [*erets*]; Indeed, the world is firmly established, it will not be moved. (1 Chronicles 16:30) (This does not refer to earthquakes!)
- Let all [*kol*] the earth [*erets*] fear the LORD; Let all the inhabitants of the world stand in awe of Him. (Psalm 33:8) (People, not planets, fear the Lord)
- For the choir director. A Song. A Psalm.) Shout joyfully to God, all the earth; (Psalm 66:1) (People shout, not the earth)
- "All the earth will worship Thee, And will sing praises to Thee; They will sing praises to Thy name." Selah. (Psalm 66:4) (People worship, not the earth)
- Sing to the LORD a new song; Sing to the LORD, all [*kol*] the earth [*erets*]. (Psalm 96:1) (People sing, not the earth)
- Worship the LORD in holy attire; Tremble before Him, all [*kol*] the earth [*erets*]. (Psalm 96:9) (People worship, not the earth)
- Shout joyfully to the LORD, all [*kol*] the earth [*erets*]; Break forth and sing for joy and sing praises. (Psalm 98:4) (People shout, not the earth)
- (A Psalm for Thanksgiving.) Shout joyfully to the LORD, all [*kol*] the earth [*erets*]. (Psalm 100:1) (People shout, not the earth)
- He is the LORD our God; His judgments are in all [*kol*] the earth [*erets*]. (Psalm 105:7) (Judgments are done against people, not the planet)
- "The whole [*kol*] earth [*erets*] is at rest and is quiet; They break forth into shouts of joy. (Isaiah 14:7) (People shout, not the earth)

The "whole earth" usually refers to local geography

Examples of where *kol erets* refers to a local area include the following verses:

- "Is not the whole [*kol*] land [*erets*] before you? Please separate from me: if to the left, then I will go to the right; or if to the right, then I will go to the left." (Genesis 13:9) (The "whole land" was only the land of Canaan)
- And the people of all [*kol*] the earth [*erets*] came to Egypt to buy grain from Joseph, because the famine was severe in all the earth. (Genesis 41:57) (The people from the Americas did not go to Egypt)
- Then God said, "Behold, I am going to make a covenant. Before all your people I will perform miracles which have not been produced in all [*kol*] the earth [*erets*], nor among any of the nations; and all the people among whom you live will see the working of the LORD, for it is a fearful thing that I am going to perform with you. (Exodus 34:10) (There would be no need to add "nor among any of the nations" if "all the earth" referred to the entire planet.)
- "You shall then sound a ram's horn abroad on the tenth day of the seventh month; on the day of atonement you shall sound a horn all [*kol*] through your land [*erets*]. (Leviticus 25:9) (The Hebrews were not required to sound a horn throughout the entire earth)
- "Thus for every [*kol*] piece [*erets*] of your property, you are to provide for the redemption of the land. (Leviticus 25:24) (The law does not apply only to those who own the entire earth)
- behold, I will put a fleece of wool on the threshing floor. If there is dew on the fleece only, and it is dry on all [*kol*] the ground [*erets*], then I will know that Thou wilt deliver Israel through me, as Thou hast spoken." (Judges 6:37, see also 6:39-40) (*kol erets* could not refer to the entire earth, since it would not be possible for Gideon to check the entire earth)
- And Jonathan smote the garrison of the Philistines that was in Geba, and the Philistines heard of it. Then Saul blew the trumpet throughout [*kol*] the land [*erets*], saying, "Let the Hebrews hear." (1 Samuel 13:3) (Obviously, Saul could not have blown a trumpet loud enough to be

heard throughout the entire earth)

- For the battle there was spread over the whole [kol] countryside [erets], and the forest devoured more people that day than the sword devoured. (2 Samuel 18:8) (No, the battle did not take place over the entire earth.)
- So when they had gone about through the whole [kol] land [erets], they came to Jerusalem at the end of nine months and twenty days. (2 Samuel 24:8) (No they didn't go through the entire earth, just the lands of Palestine.)
- And all [kol] the earth [erets] was seeking the presence of Solomon, to hear his wisdom which God had put in his heart. (1 Kings 10:24) (It is unlikely that the Native Americans went to see Solomon.)
- Then the fame of David went out into all [kol] the lands [erets]; and the LORD brought the fear of him on all the nations. (1 Chronicles 14:17) (It is unlikely that the Native Americans knew about David.)
- And David said, "My son Solomon is young and inexperienced, and the house that is to be built for the LORD shall be exceedingly magnificent, famous and glorious throughout all [kol] lands [erets]. (1 Chronicles 22:5) (The temple was famous to all the lands in the Middle East, but was destroyed before the advent of globalism.)
- And they were bringing horses for Solomon from Egypt and from all [kol] countries [erets]. (2 Chronicles 9:28) (It is unlikely that the Chinese brought horses to Solomon)
- Many more examples⁸

As can be seen above, in the majority of instances kol erets does not refer to the entire planet earth. In fact, of the 205 instance of kol erets in the Old Testament, it might refer to the entire planet just 40 times,⁹ and even some of those are questionable. About half of those instance occur in the books of Psalms and Isaiah. The Genesis flood narrative also uses the phrase "the face of the earth." This is the exact phrase used by Cain when he was banished by God (Genesis 4:14). Are we to think that Cain was banished to outer space? In addition, the flood narrative says that "the water increased and lifted up the ark, so that it rose above the earth" (Genesis 7:17). If "earth" really refers to the planet, this text would imply that the ark somehow levitated above the planet. Obviously, "earth" refers to the local land on which the ark was sitting, and not to planet earth.

How could the text have more clearly indicated a global flood?

I am glad you asked! There is a Hebrew word that always refers to the entire earth or the entire inhabited earth. The word is *tebel* (Strong's H8398), which is found 37 times in the Old Testament. Curiously, this word is never used to describe the flood, although it is used extensively to describe the creation of the earth and the judgment of the peoples of the earth.

The Local Flood - from the Genesis text

Erets revisited

Let's look at the actual Genesis flood passage to determine if it can be interpreted from a local viewpoint. As we determined above, the word *erets*, often translated "earth" can also refer to the people of the earth. Is it used this way in the actual Genesis flood passage?

- Now the earth was corrupt in the sight of God, and the earth was filled with violence. (Genesis 6:11)
- And God looked on the earth, and behold, it was corrupt; for all flesh had corrupted their way upon the earth. (Genesis 6:12)
- I set My bow in the cloud, and it shall be for a sign of a covenant between Me and the earth. (Genesis 9:13)

Genesis 6, verses 11 and 12 both tells us that the earth was corrupt, although we understand this verse to refer to the people of the earth. Likewise, in Genesis 9:13, the verse tells us that God made a covenant between Himself and the earth. However, later verses clarify that the covenant is between God and the creatures of the earth.¹⁰ The Genesis text clearly establishes (along with the New Testament¹¹) that God's judgment of humans was universal (with the exception of Noah and his family).

Outside Genesis one (through Genesis 2:5), the entire Genesis account through the Tower of Babel (Genesis 11) specifically refers to local geography. **All** the place names mentioned are in the Mesopotamian flood plain. Therefore, all the instances of the word *erets* can and should be translated "land," instead of "earth," since it all refers to local geography. There is no reason to think that the flood account is any different from the rest of the Genesis account through chapter 11.

When "all" does not mean "all"

The flood passage uses many universal descriptions, which suggest global proportions. However, the universal text contradicts itself, if it is to be interpreted globally. For example, the Genesis text tells us that all flesh had become corrupted.¹² However, the same passage tells us that Noah was a "righteous man, blameless in his time."¹³ It is clear from the text that "all flesh" did not actually refer to all flesh, since there was at least one exception.

Local perspective of the flood

Does the Genesis text indicate that the flood was local? If you read it carefully, you can determine that the perspective is local. Most English translations are actually interpretations that are intentionally skewed to favor a global flood interpretation. For example, Genesis 7:20 is usually translated as:

The water prevailed fifteen cubits higher, and the mountains were covered. (Genesis 7:20)

In reality, the Hebrew word *ma'al*, translated "higher" really means "upward." So, in essence, the text is saying that the flood was 15 cubits (20 feet) deep, in total, not 15 cubits above the mountains. In addition, the Hebrew word *har* really refers most often to hills rather than mountains. See [below](#).

The translators of most English Bibles use the word "earth," which to us means "planet earth." However, their mistranslation can clearly be seen in the following passage:

- Gen 8:5 And the water decreased steadily until the tenth month; in the tenth month, on the first day of the month, the tops of the mountains became visible.
- Gen 8:6 Then it came about at the end of forty days, that Noah opened the window of the ark which he had made;
- Gen 8:7 and he sent out a raven, and it flew here and there until the water was dried up from the earth.
- Gen 8:8 Then he sent out a dove from him, to see if the water was abated from the face of the land;
- Gen 8:9 but the dove found no resting place for the sole of her foot, so she returned to him into the ark; for the water was on the surface of all the earth. Then he put out his hand and took her, and brought her into the ark to himself.

We see that in the tenth month, the mountains became visible to Noah (Genesis 8:5). Some 40+ days later (Genesis 8:6), Noah sent a dove out of the ark (Genesis 8:8). However, the dove was unable to land because of all the water (Genesis 8:9). Then, the text tells us that water was "on the surface of all the earth." This is obviously a bad translation of *kol erets*, since we know that the water had not covered the mountains for at least 40 days. The context makes it clear that *kol erets* must refer to local geography and should be translated as the "all the land" or "all the ground." In fact, all our major English translations (NASB, NIV, KJV, etc.) make this same error. It is no wonder that people who read the English translation of the Bible "literally" come to the conclusion that the flood must have been global. However, it is apparent that our English "translations" of the Genesis flood text are more than just "translations," but actually interpretations (and probably incorrect ones at that).

There is another indication in the text that the flood did not cover the highest mountains. Again, from Genesis 8:

So he waited yet another seven days; and again he sent out the dove from the ark. And the dove came to him toward evening; and behold, in her beak was a freshly picked olive leaf. So Noah knew that the water was abated from the earth. (Genesis 8:10-11)

If the ark had come to rest on the top of Mount Ararat, this would be at 17,000 foot elevation. Olive trees (and every other tree) do not grow at 17,000 feet. In fact, you will not find olive trees growing much above 5,000 feet. Therefore, we know from the Bible that the ark did not come to rest on or near the top of Mount Ararat, but probably somewhere on the foothills of the mountain.

The method by which the flood ended also tells us that the flood was local. According to Genesis, the water receded and was dried by the wind.¹⁴ If the flood were global, there would be no place for the waters to recede to. Likewise, a wind would not significantly affect a global flood, further suggesting that the Genesis flood was local in extent.

New Testament perspective

What does the New Testament tell us about the flood? As mentioned previously, the New Testament tells us that the flood was universal in its judgment.¹¹ Besides this, there is an interesting passage from 2 Peter that gives some insight into the nature of the flood:

For when they maintain this, it escapes their notice that by the word of God the heavens existed long ago and the land was formed out of water and by water, through which the world at that time was destroyed, being flooded with water. (2 Peter 3:5-6)

Peter, instead of just telling us that the entire planet was flooded, qualifies the verse by telling us that the "world at that time" was flooded with water. What was different about the world "at that time" compared to the world of today? At the time of the flood, all humans were in the same geographic location (the people of the world were not scattered over the earth until Genesis 11).⁷ Therefore, the "world at the time" was confined to the Mesopotamian plain. There would be no reason to qualify the verse if the flood were global in extent.

Early Jewish interpretation

Many Christians believe that a local flood interpretation is a recent invention of those who are trying to reconcile science with the Bible. However, the first century Jewish writer, Josephus wrote about other writers who indicated that the flood was local and that some inhabitants survived by seeking higher ground:

"Now all the writers of barbarian [Greek] histories make mention of this flood and of this ark: among whom is Berosus the Chaldean... Hieronymus the Egyptian.... Nicolaus of Damascus, in his ninety-sixth book, hath a particular relation about them, where he speaks thus: 'There is a great mountain in Armenia, over Minyas, called Baris, upon which it is reported that many who fled at the time of the Deluge were saved; and that one who was carried in an ark came on shore upon top of it; and that the remains of the timber were a great while preserved. This might be the man about whom Moses, the legislator of the Jews wrote'.⁸

Josephus does not seek to correct their narrative. So, the idea that the flood was a local event is not just a 20th century phenomenon.

Common objections to a local flood

Why didn't God send Noah on a long trip?

If the Genesis flood were local, why didn't God just send Noah and his family packing. Once they were out of the Mesopotamian flood plain, God could have judged the unrighteous without making Noah go to all the trouble of building a huge ark. It is true that God could have done this, although there are some good biblical reasons why He chose not to do so. Why did God make the Israelites march around Jericho for seven days prior to the wall falling down? Why did God make the Israelite look upon the bronze serpent to be healed of snake bite in the wilderness? Why did Jesus make the blind man go to the Pool of Siloam to heal his blindness? Were any of these things actually required for God to do His work? No! God could have just wiped out all the evil people in the world, as He did later to the all the Egyptians' first-born. Maybe God had good reasons for Noah to build the ark? God has a purpose for each person of faith to join Him in preaching His message. God's plan will be accomplished regardless of our participation in it. However, God gives obedient humans the privilege of participating in God's plans. Likewise, God had a plan for Noah, part of which was for him and his sons to demonstrate their commitment and perseverance to the Lord.

One will notice in the judgments that God renders, He almost always gives a warning to those who are being judged. For example, God sent angels to Sodom before it was to be destroyed,¹⁵ sent Jonah to Nineveh to warn them of the judgment to come,¹⁶ and will send two prophets to warn the

people of the earth of the final judgment.¹⁷ The building of the ark was a great testimony of the coming judgment, since it was preached for 100 years during the building of the ark. The New Testament states this idea directly, since it says that Noah was a "preacher of righteousness":

For if God did not spare angels when they sinned, but cast them into hell and committed them to pits of darkness, reserved for judgment; and did not spare the ancient world, but preserved Noah, a preacher of righteousness, with seven others, when He brought a flood upon the world of the ungodly; (2 Peter 2:4-5)

If God had told Noah to just migrate away from the flood area, the people would not have been warned of the impending judgment. Ultimately, they were without excuse in their rebellion against God, since the impending judgment was proclaimed to them for 100 years before it happened. Likewise, God will send two preachers for 1260 days prior to the ultimate judgment of God.¹⁷ Those who get on God's ark (Jesus Christ) will be saved from the judgment and pass from death to eternal life.

God promised no more floods like the Genesis flood

What about the Genesis 9:11 and 9:15. If the flood was local, did God lie, since floods have destroyed local areas since the Genesis flood.

*"And I establish My covenant with you; and all flesh shall never again be cut off by the water of the flood, neither shall there again be a flood to destroy the earth." (Genesis 9:11)
and I will remember My covenant, which is between Me and you and every living creature of all flesh; and never again shall the water become a flood to destroy all flesh. (Genesis 9:15)*

The first part of the verse is a promise not to exercise universal judgment by means of a flood, "all flesh shall never again be cut off by the water of the flood." The flood, although local in extent, was global in judgment, since all humanity lived in the same locale. It wasn't until God confused the languages (Genesis 11) that people began to spread over the earth. So, God promised to never again execute universal judgment of humans by means of a flood. The second part, "never again will there be a flood to destroy the earth" can be explained by other verses found in the Genesis flood account.

Gen 6:11 Now the earth was corrupt in the sight of God, and the earth was filled with violence.

Gen 6:12 And God looked on the earth, and behold, it was corrupt; for all flesh had corrupted their way upon the earth.

The passage in this instance refers to the people of the earth, since planet earth itself was not corrupt. Likewise, Genesis 9:11 is referring to the people of the earth rather than the planet itself. Ultimately, even if the flood were global, it did not "destroy the earth," but just the people on the earth. As stated [above](#), "people" is often understood from the Hebrew word *erets*.

Why were birds on the ark?

If the Flood was local, why would birds have been sent on board? They could simply have flown to a nearby mountain range. Most birds (other than a few migratory birds) have a very localized territory. They would have been killed in the local flood, since they are not designed to fly long distances. Certainly archaeopteryx was not a strong flyer. Hummingbirds would drop dead in 20 minutes or less. One thing that you will notice when there is a strong rain is that birds do not fly. Flying in heavy rain is not easy. They would have sat on their perches until the water drowned them.

Why did God required Noah to take animals if the flood was local?

Some animals are indigenous only to the Mesopotamian area. More importantly, it would have taken hundreds of years longer to replace the fauna if everything had been wiped out and had to migrate back in. In addition, Noah would have had a huge problem replacing his herds.

How could the flood waters rise 15 cubits (8 meters) above the mountains in a local flood (Genesis 7:20)?

Didn't the flood cover the highest mountains? The Hebrew word "har," translated "mountains," occurs 649 times in the Old Testament. In 212 instances, the word is translated "hill" or "hills" or "hill country". In Genesis, it is translated "hill" in 10 out of 19 occurrences. Of course, 4 out of 9 times that it is translated as "mountain" is in the flood passage (the translators were wearing their global glasses when they did that translation!). In every instance in Genesis, the text could be translated "hill". Since no specific mountain range is mentioned in this verse, it is likely that the word refers to the hills that Noah could see.

Conclusion

This paper has shown that the Bible declares the Genesis flood to be local in extent, though universal in its judgment of humans (with the exception of Noah and his family). The evidence presented here is purely biblical, although a strong case could also be given for extra-biblical reasons. A global interpretation of the Genesis flood requires that certain non-flood-related verses of the Bible contradict each other. In addition, a global interpretation of the Genesis flood would require the Genesis text to contradict itself. The lack of global references in the book of Genesis through chapter 11 (with the exception of Genesis 1), reveals that all the early events of Genesis occurred in a small geographic area. In addition, an examination of the original Hebrew text of the Genesis flood passage demonstrates that the global wording of our English translations misrepresents the original intent of the account. Your assignment at this point is to re-read the Genesis flood text with the words "land" or "people" (depending upon the context) substituted where for the word "earth." When you are finished, you will discover a remarkably different flood account than what you have read before.

(references omitted, see web page below for the references)
<http://www.godandscience.org/apologetics/localflood.html>
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Genesis 6

1 When mankind began to increase on the face of the earth, and daughters were born to them, 2 The sons of God saw that the daughters of men were good; and they took for wives those which they selected. 3 And the LORD said, My Spirit will not always plead

with mankind, for they are lustful: their time will be a hundred and twenty years. 4 There were fallen men on the land at that time, and also after that, when the sons of God came to the daughters of men, and they bore children to them, they became mighty men which were of old, men of authority. 5 And God saw that the wickedness of mankind was abundant on the land, and that any purpose of the imagination of their mind was continually evil. (Gen 8:21; Job 15:16; Prov 6:14; Jer 17:9; Matt 15:19; Rom 3:10-12; Rom 8:6;) 6 And sighed the LORD that He had brought forth mankind on the land, and it grieved Him in His heart. 7 And the LORD said, "I will wipe away man who I have created from the face of the land; both man, and beast, and the creeping thing, and the birds of the heavens; for I sigh that I have brought them forth." 8 But Noah found grace in the eyes of the LORD. 9 These are the generations of Noah: Noah was a righteous man and undefiled in his generations, and Noah walked with God. (Gen 5:22;) 10 And Noah fathered three sons, Shem, Ham, and Japheth. 11 The land also was corrupt in the sight of God, and the land was filled with violence. 12 And God gazed upon the land, and, behold, it was corrupt; for all mankind had corrupted their manner on the land. 13 And God said to Noah, "The end of all mankind has come before Me; for the land is filled with violence among them; and, behold, I will cause them to perish from the land. 14 Build an ark of pitch trees; make nests in the ark, and cover it inside and out with pitch. 15 Build it by this plan: The length of the ark will be three hundred cubits, the width fifty cubits, and the height thirty cubits. 16 Provide a window to the ark and enclose it to within a cubit of the top; and the door to the ark set in the side; build it with lower, second, and third levels. 17 And, behold, I, even I, will bring a flood of waters upon the land, to wipe out all mankind, in which is the breath of life, among those under heaven. All that is on the land will perish. 18 But with you will I establish My covenant; and you will come into the ark, and your sons, and your wife, and your sons' wives with you. (1Pet 3:20; 2Pet 2:5;) 19 And among all living things of all flesh, two of every kind will you bring into the ark, to keep them alive with you; they will be male and female. 20 Among birds after their kind, and among cattle after their kind, among every creeping thing of the land after their kind, two of every kind will come to you, to keep them alive. 21 And keep for yourself every kind of food that is eaten, and you will gather it in; and it will be for food for you and for them." 22 This Noah fulfilled; he accomplished everything that God commanded. (Gen 7:5; Heb 11:7;)

Genesis 7

1 And the LORD said to Noah, "Enter you and all your family into the ark; for you I have seen in this generation as righteous before Me. (2Pet 2:5; Gen 6:9;) 2 Among every clean beast you will receive by sevens, the male and his female: and among beasts that are not clean by two, the male and his female. (Lev 11:1-47;) 3 Among birds of the heaven by sevens, the male and the female; to preserve them on the face of all the land. 4 For in seven days, I will cause it to rain upon the land forty days and forty nights; and all living things that I have brought forth I will wipe from off the face of the land." 5 And Noah accomplished all that the LORD commanded. (Gen 6:22;) 6 And Noah was a son of six hundred years when the flood of waters was on the land. 7 And Noah entered, and his sons, and his wife, and his sons' wives with him, into the ark, because of the waters of the flood. (Matt 24:38; Luke 17:27; 1Pet 3:20;) 8 Among clean beasts, and among beasts that are not clean, and among birds, and among all that creeps on the land, 9 entered in two by two to Noah in the ark, the male and the female, as God had commanded Noah. 10 And after seven days the waters of the flood were on the land. 11 In the six hundredth year of Noah's life, in the second month, the seventeenth day of the month, at that time were all the wells of the great deep cleaved, and the windows of heaven were opened. 12 And the rain was upon the land forty days and forty nights. 13 On that very time entered Noah, and Shem, and Ham, and Japheth, the sons of Noah, and Noah's wife, and the three wives of his sons with them, into the ark; 14 They, and every beast after its kind, and all the cattle after their kind, and every creeping thing that creeps on the land after its kind, and every bird after his kind, all sort of little birds. 15 And they went to Noah in the ark, two and two of all flesh, which had the breath of life. 16 And those going in, entered in male and female among all flesh, as God had commanded: and the LORD shut them in. 17 And the flood was forty days upon the land; and the waters increased, and raised up the ark, and it was lift up above the land. 18 And the waters prevailed, and were increased greatly on the land; and the ark floated on the face of the waters. 19 And the waters prevailed exceedingly upon the earth; and all the high hills, that were under all the heaven, were covered. 20 Fifteen cubits upward the waters prevailed; and the hills were covered. 21 And all flesh died that moved upon the land, birds, cattle, and beasts, and of all creeping thing that creeps upon the land, and all men: (Luke 17:27; 22) All in whose nostrils was the breath of life, among all that was on the dry land died. 23 And every living substance was wiped away which was on the face of the ground, both man, and cattle, and the creeping things, and the birds of the heaven; and they were wiped off from the land: and Noah only remained alive, and they that were with him in the ark. (2Pet 2:5;) 24 And the waters prevailed on the land a hundred and fifty days.

Following is a theological discussion concerning the age of the earth!!

A Biblical Case for Old-Earth Creationism

Jon W. Greene of GodandScience.org

One of the most fundamental doctrines held dear by Christians is God's creation of the world and all living creatures. Yet among evangelicals, an ongoing controversy exists regarding the age of the earth and when God created the universe and life. Indeed, the "young-earth" vs. "old-earth" debate is one of the most polarizing and divisive issues within the Christian community.

This paper presents the biblical case for "old-earth creationism" (OEC) and endeavors to clear up theological misconceptions regarding OEC held by many well-intentioned "young-earth creationist" (YEC) believers. The purpose is not to dissuade young-earth believers from their position, but rather to propose OEC as a well-reasoned, Bible-honoring view that has been embraced by scholars such as Francis Schaeffer, James Boice, and Norman Geisler.

Old earth beliefs

Before presenting a more detailed explanation of OEC, here is a brief summary of core beliefs. Old earth creationists contend:

- God miraculously created the universe from nothing (*ex nihilo*), created life from non-life, and progressively intervened in history to supernaturally create new species of life.
- The age of the earth has no bearing on the creation of life. An ancient earth does not equate with Darwinian evolution.
- Darwinian evolution (change through unguided naturalistic processes) is unbiblical, biologically untenable, and not supported by the fossil record. Old-earth creationists adamantly reject the Darwinian concept of common descent—the hypothesis that all plant, animal, and human life ultimately evolved from primitive single-celled organisms through unguided mutations and naturalistic processes.
- God miraculously created Adam and Eve, humanity's historical parents, who were new distinct creatures from whom humanity's sin originated.
- Earth's geologic features formed over long ages through both gradual and catastrophic processes.
- Genesis 1 is a literal account of God's creation. After God created the heavens and the earth, He then created life over six successive "days," which in the original Hebrew may be literally interpreted as long epochs of time.

Old Earth Believers

Old-Earth Creationism (AKA "day-age" or "progressive" creationism) is distinct from other types of creationism, namely Gap theory, Framework Hypothesis, and Theistic Evolution. The most prominent 21st century proponent of OEC (progressive creationism) is Reasons to Believe, an international, non-denominational ministry founded by astronomer Hugh Ross, Ph.D. While young-earth believers may regard the OEC view as lacking Biblical authority, many conservative theologians and well-respected Christian apologists embrace the old-earth hermeneutic and vigorously defend Biblical inerrancy, including the following:

- 19th century Theologians: Charles Hodge (A.D. 1797-1878), A.A. Hodge (A.D. 1823-1886), John Gresham Machen (A.D. 1881-1937), William G. T. Shedd (A.D. 1820-1894), Benjamin B. Warfield (A.D. 1851-1921).¹
- 20th century Theologians: Gleason Archer and R. Laird Harris (co-authors, [Theological Wordbook of the Old Testament](#)), James Montgomery Boice (Chairman of the International Council on Biblical Inerrancy), Francis Schaeffer (founder of L'Abri Fellowship), R.A. Torrey (Editor, [The Fundamentals](#) (A.D. 1907-1917), Edward J. Young (whose work was regarded as "the epitome of conservative exegetical orthodoxy").²
- Contemporary Theologians and Apologists: John Ankerberg, Bill Bright (Founder, Campus Crusade for Christ), C. John Collins (Chairman, Old Testament Committee, [The ESV Bible](#); Ph.D., Hebrew linguistics), Chuck Colson, Paul Copan, William Lane Craig, Norman Geisler (author of numerous books, including [Baker Encyclopedia of Christian Apologetics](#)), Wayne Grudem (General editor, [The ESV Study Bible](#); author, [Systematic Theology: An Introduction to Biblical Doctrine](#)), Hank Hannegraff (Bible Answer Man), Jack Hayford, Walter Kaiser (President Emeritus, Gordon-Conwell Theological Seminary), Phillip E. Johnson (founder of Intelligent Design movement), Greg Koukl (Stand to Reason ministry), J.P. Moreland, J.I. Packer, Nancy Pearcey, Vern Poythress, Earl Radmacher (President Emeritus, Western Seminary), Lee Strobel (author of [The Case for Christ](#), [The Case for a Creator](#)), and Dallas Willard.³

So what exactly do old-earth creationists believe? Below are the fundamental beliefs of old-earth ("day-age") creationism.

The Bible

Proponents of OEC believe the Bible is the inspired, infallible, inerrant Word of God and believe the Genesis creation account to be historical narrative—not myth, allegory, legend or poetic expression. While YECs believe a "plain reading" of the English translation of Genesis 1 necessitates belief that God created the world in six 24-hour days some six to ten thousand years ago, OECs believe that textual and grammatical nuances of the original Hebrew suggest six long epochs of time. Indeed, OECs contend a literal reading of the Biblical creation accounts in Hebrew provides certain exegetical clues pointing to prolonged creation "days."⁴

Creation days

Biblical Hebrew has a very limited vocabulary (approximately 3,100 words) compared to the English vocabulary (estimated to be 1,000,000 words). Hebrew words often have several literal meanings.⁵ Linguistic scholars acknowledge the Hebrew word *yôm* (translated "day" in English) has several literal meanings: a period of daylight, 12-hour day, 24-hour day, time, period of time with unspecified duration, and epoch of time.⁶ While modern English has numerous words to describe a long time-span, no word in biblical Hebrew adequately denotes a finite epoch of time other than *yôm*.⁷

Young-earth creationists such as Kenneth Ham, founder of Answers in Genesis, claim "day" (*yôm*) attached to a number or "ordinal" (1st, 2nd, 3rd "day") necessarily means 24-hour days. However, noted Bible scholars dispute that assertion.⁸

Hebrew linguist Gleason Archer writes, "On the basis of internal evidence, it is this writer's conviction that *yôm* in Genesis could not have been intended by the Hebrew author to mean a literal twenty-four hour day."⁹ Dr. Norman Geisler states, "Numbered days need not be solar. Neither is there a rule of Hebrew language demanding that all numbered days in a series refer to twenty-four hour days. Even if there were no exceptions in the Old Testament, it would not mean that 'day' in Genesis 1 could not refer to more than one twenty-four-hour period."¹⁰

Note, however, there are Old Testament verses where *yôm* attached to a number actually does refer to long time periods. Here are two examples:

- Hosea 6:2, He will revive us after two days; He will raise us up on the third day. This refers to Israel's ultimate restoration hundreds or thousands of years in the future.
- Zechariah 14:7, describing the Day of the Lord, contains *yôm echad* (translated "unique day"), which is identical to *yôm echad* of Genesis 1:5 (translated "one day"). The context of Zechariah 14:7-8 suggests *yôm echad* will be a period of time spanning at least one summer and one winter, obviously longer than a 24-hour calendar day.

Archer and Geisler also point out that no definite article ("the") appears with *yôm* on days one through five in Genesis one. Archer says the absence of "the" implies a more vague meaning than 24 hours—an indefinite but literal sense of time or age.

Similarly, YECs claim "day" (*yôm*) accompanied by the phrase "and there was evening and there was morning" necessitates a 24-hour day

interpretation. Others dispute that assertion, suggesting the phrase was merely intended to communicate that each “day” or epoch had a definite beginning and ending. For instance, [The Wycliffe Bible Commentary](#) states, “These are not ordinary days bounded by minutes and hours, but days of God...The beginning of each act of creation is called morning, and the close of that specific divine act is called evening.”¹¹ Noted Hebrew linguist Gleason Archer concurs: “Concerning the recurring [evening and morning] formula at the end of each creative day...there were definite and distinct stages in God’s creational procedure...it serves as no real evidence for a literal twenty-four-hour day concept on the part of the biblical author.”¹² Other Hebrew language scholars (C. John Collins, Bruce Waltke, and Rodney Whitefield) agree the evening/morning phrase does not necessitate a 24-hour day interpretation.¹³ Collins comments that the order of evening and morning is a time-span that includes no daylight. While it is commonly thought that evening/morning represents a “day,” Collins says “Logically, this is nonsense [since] a day must describe 24 hours or at least a period of daylight.” He further states “and there was evening, and there was morning” brackets the night and marks the end points of each workday of God.¹⁴

Furthermore, the seventh day lacks the concluding refrain, “and there was evening and there was morning,” suggesting a non-ending day. The ongoing nature of the seventh day is implied in Hebrews 4:1-11, which describes God’s Sabbath rest: “Therefore, while the promise of entering his rest still stands...” (Hebrews 4:1). Verse 4 clearly ties God’s rest to the seventh day of creation, “And God rested on the seventh day,” while verse 6 states “Since therefore it remains for some to enter it.” If God’s seventh day were limited to 24 hours, it would be impossible for believers to enter it now. Though the work of creation has ceased, God’s ongoing work of bringing salvation to humanity continues: “Now we who have believed enter that rest, just as God has said...Let us therefore strive to enter that rest, so that no one may fall by the same sort of disobedience” (Hebrews 4:3,11).

Many in the young-earth community point to Exodus 20:9-11 as evidence for a creation week of 24-hour days: For in six days the LORD made heaven and earth, the sea, and all that is in them, and rested the seventh day. Reference to the Sabbath in Exodus 20 illustrates God’s pattern of six days of work and one day of rest, not their duration: God’s six yōms (epochs) of creating and one of rest. Man’s six days of work and one day of rest. The land’s six years of cultivation and one year of rest (Leviticus 25:4). Gleason Archer notes, “By no means does this demonstrate that 24-hour intervals were involved in the first six ‘days,’ any more than the eight-day celebration of the Feast of Tabernacles proves that the wilderness wanderings under Moses occupied only eight days.”¹⁵

Here are the views of several respected scholars on the meaning of the creation “day” (yōm):

- R.A. Torrey (1856-1928), founder of Talbot Seminary and editor of *The Fundamentals* (12 volumes, published in 1910): “Anyone who is at all familiar with the Bible and the way the Bible uses words, knows that the use of the word ‘day’ is not limited to twenty-four hours. It is frequently used to denote a period of entirely undefined length...There is no necessity whatsoever for interpreting the days of Genesis 1 as solar days of twenty-four hours length.”¹⁶
- J. Gresham Machen (1881-1937), considered the last of the great orthodox Princeton theologians: “It is certainly not necessary to think that the six days spoken of in that first chapter of the Bible are intended to be six days of twenty four hours each. We may think of them rather as very long periods of time.”¹⁷
- Edward J. Young (1907-1968), regarded as the epitome of conservative exegetical orthodoxy: “But then there arises the question as the length of these days. That is a question which is difficult to answer. Indications are not lacking that they may have been longer than the days we now know, but the Scripture itself does not speak as clearly as one might like.”¹⁸
- James Montgomery Boice (1938-2000), chairman of the International Council on Biblical Inerrancy: “[Young-earth] creationists insist that the days cover a literal 24 hours, but this is not necessarily the case. Sometimes the word ‘day’ is used with a broader meaning...it can mean a period of indefinite duration.”¹⁹ “Any view that makes the earth 12 to 20 thousand years old flies in the face of too much varied and independent evidence to be tenable. In my judgment the earth and universe are indeed billions of years old.”²⁰

Both young-earth and old-earth creationists believe the Bible is inspired and defend their views as being literal. The issue is interpretation of the Genesis text. Bruce Waltke asserts young-earth exegesis is hindered by an adherence to a “woodenly literal” reading of Genesis.²¹ Gordon Wenham concurs: “Six days has been seized on and interpreted over-literally, with the result that science and Scripture have been pitted against each other instead of being seen as complementary.”²²

The when of creation

The Bible does not specify the age of creation. The YEC belief that God created the world 6,000 years ago originated from a mid-17th century examination of the Genesis genealogies by Archbishop James Ussher and theologian John Lightfoot. Based on the ages of patriarchs, Ussher and Lightfoot both calculated the universe, earth, and life were created in 4004 B.C. Over the next several centuries, this date became firmly entrenched in Christian belief. The cornerstone of belief in a 6,000-year-old earth rests solely on the genealogies providing a totally accurate and complete chronology. Is it?

In the late 19th and early 20th centuries, Professor William Henry Green and theologian Benjamin B. Warfield noted gaps and omissions in the Genesis genealogies. This suggested the creation was conceivably older than the 6,000-year timeframe proposed by Ussher and Lightfoot. Today many Bible scholars believe the Genesis genealogies were written primarily to provide only highlights and not necessarily a complete record of every actual generation.²³ R.A. Torrey (1856-1928 A.D.), who was selected by D.L. Moody to become the first dean of the Moody Bible Institute, wrote the following of Bishop Ussher’s chronology: “Its accuracy is altogether doubtful. It is founded upon the supposition that the genealogies of Scripture are intended to be complete, but a careful study of these genealogies clearly shows they are not intended to be complete, that they oftentimes contain only some outstanding names.”²⁴ There are gaps in the genealogies. Wayne Grudem writes, “...closer inspection of the parallel lists of names in Scripture will show that Scripture itself indicates the fact that the genealogies list only those names the biblical writers thought it important to record for their purposes. In fact, some genealogies include names that are left out by other genealogies in Scripture itself.”²⁵

As evidence the genealogies are telescoped (compressed or abbreviated), scholars point to examples such as the genealogy of Moses, which appears four separate times in Scripture (Exodus 6:16-20, Numbers 26:57-59, 1 Chronicles 6:1-3, 23:6-13). Moses’ genealogy is given as Levi to Kohath to Amran to Moses. As straightforward as this seems, related Bible passages suggest that several generations were likely skipped between

Amran and Moses.²⁶ 1 Chronicles 7:20-27 provides a parallel genealogy of Ephraim, son of Joseph (brother of Levi), from the same period of history as the Mosaic genealogies. While only 4 generations are listed from Levi to Moses, 12 generations listed from Joseph to Joshua during the same time period.

MOSES' GENEALOGY JOSHUA'S GENEALOGY

Levi	Joseph
Kohath	Ephraim
Amran	Beriah
	Raphah
	Resheph
	Telah
	Tahan
	Ladan
	Ammihud
	Elishama
	Nun
Moses	Joshua

It has been suggested that the Mosaic genealogies are perhaps only 20 to 40 percent complete. Those who hold that the genealogies are telescoped place the creation of Adam and Eve around 10 to 30 thousand years ago, but perhaps as late as 60,000 years ago.²⁷

Experts in Old Testament genealogy note there is wide-spread consensus regarding dates and chronology from the time of Abraham. However, prior to Abraham, there is little available Biblical or historical information on which to build a solid chronology. Grudem specifically mentions "prior to Abraham, the setting of dates is very uncertain."²⁸

In addition to gaps and omissions, genealogical words such as "son" (Hebrew *ben*), "father" (*ab*), and "begat" or "fathered" (*yalad*) are central to this issue. "Son" (*ben*) has many literal meanings: son, grandson, great-grandson, great-great-grandson, or descendent. "Father" (*ab*) can literally mean father, grandfather, great-grandfather, great-great-grandfather and ancestor. "Begat" or "fathered" (*yalad*) is not limited to just the immediate generation, but can also apply to distant generations. R.A. Torrey noted, "The word translated 'begat' is sometimes used not of an immediate descendent, but of succeeding generations." Further, "son" may be a literal son or a distant descendant many centuries removed.²⁹ A good example can be found in Genesis 46:15, which enumerates the offspring of Jacob and Leah: "altogether his sons and his daughters numbered thirty-three." A careful look at this genealogy reveals that the "sons" (*ben*) included multiple generations of sons, grandsons, and great-grandsons.

As a result, the early Hebrew convention of including just the most historically important individuals in the genealogical record, coupled with the broad meanings of *ben*, *ab*, and *yalad*, raise serious questions whether the Genesis genealogies may be regarded as an absolute chronology pointing back to a 6,000-year-old earth. The genealogies themselves provide a rationale for human origins dating earlier than six to ten thousand years ago.

Creation of the universe and heavenly bodies

When the universe was first proved to have a beginning, cosmologists were up-in-arms, since they had always believed in an eternally-existing universe with no First Cause. Astronomer Fred Hoyle coined the term "Big Bang" as a term of derision, while Sir Arthur Eddington, a British cosmologist, said, "Philosophically, the notion of a beginning to the present order of Nature is repugnant...I should like to find a genuine loophole."

Atheists attribute the Big Bang origin of the universe 13.8 billion years ago to purely naturalistic mechanisms, theorizing the universe is "self-caused" or just "popped into existence." However, OECs believe the Big Bang supports the creation account in Genesis 1:1 with God speaking the universe into existence, creating it from nothing (*creatio ex nihilo*).

Genesis 1:1 is an amazing statement of God's miraculous creation of the universe: In the beginning (*re'shît*), God created (*bara*) the heavens and the earth (*ha'shamayim we ha'ere'ts*).

- **Beginning (*re'shît*):** Hebrew scholar John Sailhamer states, "Since the Hebrew word translated 'beginning' refers to an indefinite period of time, we cannot say for certain when God created the world or how long He took to create it. This period could have spanned as much as several billions years, or it could have been much less; the text simply does not tell us how long. It tells us only that God did it during the 'beginning' of our universe's history."³⁰ Whitefield notes that *re'shît* does not allow an instantaneous creation. The word suggests a period of time of unstated length which precedes the conditions described by Genesis 1:2. "Genesis 1:1 places no limits on how old the universe may be."³¹ C. John Collins suggests that the perfect verb form used in Genesis 1:1 distinguishes "the beginning" from the six-day creation narrative of Genesis 1:3-31, which is written with the wayyiqtol verb form.³² The time period between "the beginning" and the creation week is unstated in the text.
- **Created (*bara*):** The Hebrew word for "created" (*bara*) means to create out of nothing. It is a completed verb form, meaning only that the creation was accomplished at some point in the past.
- **"The heavens and the earth" (*ha'shamayim we ha'ere'ts*):** This Hebrew phrase (known as a *merism*) means "all the raw materials needed to make sun, planets, stars, nebulae, galaxies, molecules, atoms"³³, "the entire universe"³⁴, or "the organized universe, the cosmos."³⁵ This matches perfectly with the view of the big bang beginning—a cosmological singularity from which all matter, energy, space and time originated, and clearly supports *ex nihilo* creation as described in Genesis 1:1 and Hebrews 11:3: By faith we understand that the universe was created by the word of God, so that what is seen was not made out of things that are visible.

Respected Christian philosopher William Lane Craig notes, "This cosmological singularity, from which the universe sprang, marked the beginning, not only of all matter and energy in the universe, but of physical space and time themselves. The Big Bang model thus dramatically and unexpectedly supported the biblical doctrine of *creatio ex nihilo*."³⁶

One bone of contention is when the sun and moon were created. As noted above, "the heavens and the earth" (*ha'shamayim we ha'ere'ts*) is inclusive of the sun and moon, suggesting they were created "in the beginning." However, YECs point to the fourth creation day (Genesis 1:14-18) as evidence the sun and moon were created later. Let's examine the passage.

Genesis 1:16 says, *And God made (Hebrew asah) the two great lights. In contrast to the verb "create" (bara), the verb asah expresses making something from pre-existing material, not ex nihilo creation of Genesis 1:1. Further, it does not specify when God made the heavenly bodies, only that the task was completed.*³⁷ Several Bible scholars believe Genesis 1:16 is more accurately interpreted as meaning God had made the heavenly bodies prior to the fourth day.³⁸ James Boice writes, "It is not said that these [sun and moon] were created on the fourth day; they were created in the initial creative work of God referred to in Genesis 1:1."³⁹ (For those wishing to delve further into the Biblical Hebrew grammar and verb forms, please see footnote below on Whitefield's "The Fourth Creative 'Day' of Genesis: Answers to questions about the Sun, Moon, and Stars.")⁴⁰

One additional detail of the original Hebrew merits consideration. Genesis 1:14-15 tells us, *And God said, "Let there be [hāyāh] lights in the expanse of the heavens to separate the day from the night. And let them be for signs and for seasons, and for days and years"...And it was so. Verse 14 focuses on the function of the lights ("for seasons, and for days and years") rather than their origin. The completed-action phrase, "And it was so," confirms the sun and moon had completed the functions God commanded in Genesis 1:14-15 (providing signs, seasons, days and years) for at least one cycle. The completion of the cycle of seasons, days and years requires much longer than 24 hours, and therefore is an additional indication the creation yōm is a long time period.*⁴¹

Age of the earth

The Christian faith is based on truth. Scripture speaks of man knowing the Creator from His creation:

- The heavens declare the glory of God, and the sky above proclaims his handiwork. Day to day pours out speech, and night to night reveals knowledge. There is no speech, nor are there words, whose voice is not heard. Their measuring line goes out through all the earth, and their words to the end of the world. (Psalm 19:1-4)
- For what can be known about God is plain to them, because God has shown it to them. For his invisible attributes, namely, his eternal power and divine nature, have been clearly perceived, ever since the creation of the world, in the things that have been made. So they are without excuse. (Romans 1:19-20)

Philosopher and theologian Augustine of Hippo believed that science could not contradict orthodox Christianity because the Creator God and the Redeemer God are one. Truth cannot contradict truth.

Old-earth creationists accept the geological and cosmological estimates of a 4.5 billion year old earth. Scripture speaks not of a young earth or an old earth, but an ancient earth: *Hear O mountains...you everlasting foundations of the earth (Micah 6:2). The ancient mountains crumbled, and the age-old hills collapsed (Habakkuk 3:6).*

Multiple independent evidences confirm an ancient earth, including 40 different methods of radiometric dating and numerous non-radiometric measurements: *Ice core samples from Antarctica and Greenland provide an unbroken record of annual ice layers spanning the past 800,000 years. Annual tree ring records provide a continuous record of the past 15,000 years. Coral reefs record long ages of growth (Eniwetok Reef 140,000 years, and the Grand Bahama Reef 790,000 years). Ancient annual lake varve sediments provide evidence of earth's history dating back 15 to 20 million years.*⁴²

Augustine presciently wrote, "In matters that are obscure and far beyond our vision, even in such as we may find treated in Holy Scripture, different interpretations are sometimes possible without prejudice to the faith we have received. In such a case, we should not rush in headlong and so firmly take our stand on one side that, if further progress in the search of truth justly undermines this position, we too fall with it."⁴³ Copernicus and Galileo were castigated by the Church for advocating the cosmological theory of heliocentrism (earth revolving around the sun), which the Church deemed contrary to their geocentric understanding of Scripture (Psalm 93:1, Psalm 104:5, Ecclesiastes 1:5). Ultimately scientific discovery helped clarify Scripture and prompted correction of a faulty interpretation.

Young-earth believers attribute virtually all of earth's geologic characteristics to catastrophic processes that occurred during the flood of Noah. OECs believe earth's surface was formed through both rapid catastrophic processes (earthquakes, flash floods) and slow processes (plate tectonics; mountain building; formation of coal, oil, & diamonds; coral reef formation, etc.). OECs believe in the Noahic Flood and God's judgment on sinful man, but reject YEC "flood geology." (For those interested, the history of "flood geology" is a fascinating tale, which first originated in the mid-1800s through the "divine visions" of Ellen G. White, prophetess and founder of the Seventh Day Adventist movement. See references below.)⁴⁴

The truth is that many geological features of earth simply do not support the YEC flood-geology model. Christian geochemist W.U. Ault writes, "The serious Bible student will not seek to support the physical aspects of Bible history with pseudo-science."⁴⁵ Conservative theologian Wayne Grudem comments: "[I] am not persuaded that all of the earth's geological formations were caused by Noah's flood rather than by millions of years of sedimentation, volcanic eruptions, movement of glaciers, continental drift, and so forth...its advocates have persuaded almost no professional geologists, even those who are Bible-believing evangelical Christians."⁴⁶

Young-earth believers posit the 6,000 to 10,000 year-old creation just appears to be much older. OECs reject the "appearance of age" concept. The "appearance of age" theory was first conceived by Philip H. Gosse in 1857. It was rejected in Gosse's day, but was once again resurrected by John Whitcomb in 1961. Theologian Wayne Grudem asks, "Why would God create so many different indications of an earth that is 4.5 billion years old if this were not true?" Hebrews 6:18 states, *It is impossible for God to lie. It is not in God's nature to create something young and fallaciously give it the appearance of age. The concept runs contrary to Romans 1:19-20: For what can be known about God is plain to them, because God has shown*

it to them. For his invisible attributes, namely, his eternal power and divine nature, have been clearly perceived ever since the creation of the world, in the things that have been made. So they are without excuse.

In the final analysis, it is antithetical to God's nature to create a young earth and give it an artificial appearance of old age.

Creation of life and mankind

Both young-earth and old-earth creationists believe God created all life. OECs believe God created the earliest primitive micro-organisms on earth approximately 3.8 billion years ago and continued to create life through the "days" of creation (long epochs of time), including all plant life, sea and flying creatures, land animals including primitive bipedal primates, and finally humanity's actual historical parents, Adam and Eve, God's "crown-jewel" of creation, made in His image (Imago Dei).

Young-earth and old-earth views on God's creation of plant-life reveal significantly different interpretations of Scripture. The young-earth view is well stated by John MacArthur: "He created them as fully mature, fully developed...He did not create just seeds and cells...He made trees with already-mature fruit...The garden itself was created mature, fully functional, and therefore with the appearance of age."⁴⁷ But what does Genesis say?

And God said, "Let the earth sprout [dasha] vegetation, plants yielding seed, and fruit trees bearing fruit after their kind, with seeds in them, on the earth," and it was so. The earth brought forth [yatsa] vegetation, plants yielding seed according to their own kinds, and trees bearing fruit in which is there seed, each according to its kind.

The old-earth interpretation differs in several important ways. First, the old-earth view posits the sun is already present, having been created "in the beginning," as part of "the heavens and the earth" (ha'shamayim we ha'erets), as opposed to the young-earth view in which the sun is not created until the fourth day of creation (the day following the creation of plant life). Second, Genesis 1:11 does not literally state that God created vegetation and trees fully formed. Rather, it says that God commanded the earth to sprout vegetation and trees. The Hebrew word translated "sprout" (dasha) means "to cause to sprout or shoot forth," and "brought forth" (yatsa) means to "come out or go forth." There is no mandate that God created fully-formed plants and fruit trees. Third, the Hebrew phrase translated "and it was so" in Genesis 1:3-31 merely indicates the completion of God's commands. (It is the waw-consecutive form of the imperfect verb "to be" and has the completed action meaning.) This phrase does not mean that the command was achieved immediately. It only indicates completed action (see footnote 34), but not when the action was completed.⁴⁸ "And it was so" means God's command, "the sprouting of vegetation, plants yielding seed, and fruit trees bearing fruit," was fully completed. These completed processes ("plants yielding seed and trees bearing fruit") require seasons and years, not just 24-hours. Textual evidence, therefore, seems to favor a view much longer than 24 hours.

OECs believe God created all life, from the simplest one-celled organism to the most complex creature. Origin-of-life researchers are stumped in their quest to find unguided naturalistic processes necessary for bringing life from non-life, since even the simplest primitive organism is unimaginably complex. Francis Crick, co-discoverer of DNA, comments, "An honest man, armed with all the knowledge available to us now, could only state that in some sense, the origin of life appears at the moment to almost be a miracle, so many are the conditions which would have had to have been satisfied to get it going."⁴⁹

Regarding mankind, as noted earlier, the Genesis genealogies do not define the exact date of the creation of Adam and Eve. Whether humanity's parents were created less than 10,000 years ago (YEC view) or more than 10,000 years ago (OEC view), both OEC and YEC believe in the historical creation of Adam and Eve and the historical Fall. They were at the headwaters of the human race and the result of special creation.⁵⁰ In contrast, "Theistic Evolution" denies the historicity of Adam and Eve and the Fall. This has profound theological implications, because the Fall of our historical parents is inseparable from the origin of sin and the doctrine of redemption. If mankind did not fall in Adam, we cannot be redeemed in Christ.

A quick note from science: Recent mitochondrial DNA studies in human females and recent Y-chromosomal studies in males trace all human origins back to one woman and one man, who geneticists refer to as "Mitochondrial Eve" and "Y-chromosome Adam."⁵¹

Darwinian evolution

Many in today's secular society believe that Darwinism has reduced the Bible to a foolish fairy tale. The "New Atheists" (Richard Dawkins, Christopher Hitchens, Sam Harris, and Daniel Dennett) routinely denigrate Christians as being "flat-earthers who reject real science and believe in a 6,000 year old earth." Evolutionists incorrectly assume that an ancient universe makes Darwinism true, and YECs mistakenly assume that since OECs believe in an old earth, they also believe in evolution. Both assumptions are false.

Like young-earth advocates, old-earth creationists accept "micro-evolution" (i.e., variation in bird beak size, development of bacterial resistance to antibiotics, minor changes within species, etc.), but adamantly reject Darwinian "macro-evolution," which posits that all life originated from primitive one-celled organisms that ultimately evolved by unguided naturalistic processes into the broad diversity of plants and animals that have populated planet earth.

Old-earth creationists believe God supernaturally created all life over long ages of time, allowing early species to die out and then create new species, "renewing the face of the ground" (Psalm 104:29-30). OECs accept the geologic record as an indication of the age of the earth, but contrary to evolutionists, believe the fossil record more correctly reflects God's creation of life rather than evolution. For example, during earth's geologic Cambrian Period (circa 530 million years ago), numerous complex life forms appeared abruptly in the fossil record with no prior historical traces. The sudden and simultaneous appearance of more than 70 complex animal phyla defies a naturalistic explanation.⁵² Complex Cambrian life-forms just suddenly appeared, in agreement with Genesis 1:20-23. Paleontologists refer to this as the Cambrian Explosion. Harvard evolutionary paleontologist George Gaylord Simpson writes, "It remains true, as every paleontologist knows, that most new species, genera, and families and nearly all new categories above the level of families appear in the [fossil] record suddenly and are not led up to by known, gradual, completely continuous transitional sequences."⁵³ The fossil record actually comports better with special creation than Darwinian gradualism. Mathematician Granville Sewell writes, "[T]hose who claim that science has eliminated the supernatural from Nature have a view of science that has been out of date for 80 years."⁵⁴

Further, OECs believe the irreducibly complex biomachinery found in cells and the complex specified information present within protein molecules and DNA code clearly and unequivocally point to an Intelligent Designer—God. Renowned British Philosopher Antony Flew, a former atheist, writes, “It is impossible for evolution to account for the fact that one single cell can carry more data than all the volumes of the Encyclopedia Britannica.” Herbert Yockey, physicist and information theorist, states the universe is at least $10^{10,000,000,000}$ times too small or too young to permit life to be assembled by natural processes.⁵⁵ So whether planet Earth is 6,000 years old or 4.5 billion years old, it is still too young to generate life through naturalistic processes.

Death before the fall

Though animal death before the Fall is not found in orthodox creedal statements, today’s young-earth leaders treat it as a defining issue of Christian orthodoxy. John Morris, president of the Institute for Creation Research, states, “If death and fossils predate man’s sin, then the death of Jesus Christ did not pay (sin’s) penalty, nor did His resurrection from the dead provide eternal life.” While YECs reject all death before the Fall, OECs believe animal death was part of God’s creation long before Adam was even created. The OEC view is that Adam’s sin caused his spiritual death, eventually followed by physical death, and pre-Adamic animal death is not related to man’s salvation or Christ’s atoning work on the cross. Here is the Scriptural support for the old-earth position:

- In Genesis 2:17, God warned Adam in the garden, “For in the day that you eat from it you shall surely die.” There was no mention of animal death, just Adam’s death. Both John MacArthur (YEC) and Gleason Archer (OEC) agree this was spiritual death for Adam, followed hundreds of years later by Adam’s physical death.⁵⁶ Neither Adam nor Eve suffered physical death the day of the Fall. Following God’s warning, Adam fathered Seth after 130 years followed by other sons and daughters, and then physically died having lived 930 years (Genesis 5:3-5).
- Romans 5:12 states that “sin came into the world through one man, and death through sin.” The Greek word used for “world,” kosmos, is the same word used in John 3:16, “for God so loved the world...” Though kosmos may mean “universe” or “earth,” the most appropriate contextual meaning is “the inhabitants of earth, men, the human family” or “the ungodly multitude of men alienated from God.”⁵⁷ The verse continues, “death came to all men [anthropos], because all sinned.” This makes it clear that death came to men (Greek anthropos). Anthropos specifically refers to human beings, not animals.⁵⁸ Only man sins, not animals. Animal death is neither mentioned nor inferred in Romans 5:12 and is excluded by Paul’s use of the word anthropos. Writing of death before the Fall, theologian Louis Berkof (YEC) writes, “All of this does not mean, however, that there may not have been death in some sense of the word in the lower creation apart from sin...”⁵⁹ James Montgomery Boice (OEC) echoes Berkof: “But this does not really pertain to the animal realm, in that animals do not have God-consciousness...[It] is conceivable that animals could be created to enjoy a normal lifespan and then to die without having any of the judgmental qualities death has for man.”⁶⁰
- 1 Corinthians 15:21-22 is similarly used by YECs to suggest Adam’s sin brought about all death, including animal death. “For since by a man came death, by a man also came resurrection of the dead. For as in Adam all die, so also in Christ all shall be made alive.” However, the context clearly pertains only to mankind, with humanity’s death being defeated through the resurrection of Christ. The passage states those who die are the same as those resurrected and made alive in Christ. If ‘all’ that die in Adam includes animals, then the ‘all’ made alive by Christ must also include the animals. Certainly this is not the intent of the text, since no mention is made in the Scriptures suggesting the spiritual nature of animals, the moral capacity of animals, the need for animal redemption, nor the physical or spiritual resurrection of animals.⁶¹
- Job 38:39-41, 39:27-30, penned prior to the Genesis creation account, describes animal predation and death as part of God’s creation: Can you hunt the prey for the lion, or satisfy the appetite of the young lions, when they crouch in their dens and lie in wait in their lair?...The eagle mounts up and makes a nest on high...Spies out food; His eyes see from afar. His young ones also suck up blood; And where the slain are, there is he.
- Adam named the animals before the Fall. (Genesis 2:19-20). Though Adam obviously did not know Hebrew, the animal names chosen by the Divine Author suggest carnivorous activity. The Hebrew word for “lion” (Strong’s number H738) means “in the sense of violence.” “Cormorant” (H7994) means “bird of prey.” “Hawk” (H5322) means “unclean bird of prey.” “Eagle” (H5404) means “to lacerate.” “Owl” (H8464) means “do violence to.” The selected animal names suggest that Adam, in his pre-fallen state, may have understood animal death and had likely even witnessed it.
- Psalm 104, a poetic parallel to Genesis 1, alludes to the creation and extinction of life over eons of time: When you hide your face, they are dismayed; When you take away their breath, they die and return to the dust. When you send forth your Spirit, they are created and you renew the face of the ground. (Psalm 104:29-30) Over time animals die, return to the dust, and are subsequently followed by new generations created by God.

The issue of animal death pre-Fall is summed up succinctly by Augustine, who did not consider animal death a direct result of the Fall. He wrote, “One might ask why brute beasts inflict injury on one another, for there is no sin in them for which this could be a punishment, and they cannot acquire any virtue by such a trial. The answer, of course, is that one animal is the nourishment of another. To wish that it were otherwise would not be reasonable.”⁶²

Conclusion

Reflecting on God’s days of creation, I conclude with the words of the late Gleason Archer, Hebrew linguist, Bible scholar, educator, author, and champion for biblical inerrancy. He wrote the following in [Hermeneutics, Inerrancy, and the Bible](#):

“Moses never intended the creative days to be understood as a mere twenty-four hours in length, and the information he included in [Genesis] chapter 2 logically precludes us from doing so. It is only by a neglect of proper hermeneutical methods that this impression ever became prevalent among God’s people, during the post-biblical era. Entirely apart from any findings of modern science or challenges of contemporary scientism, the twenty-four hour theory was never correct and should never have been believed—except by those who are bent on proving the presence of genuine contradictions in Scripture...Who can calculate the large numbers of college students who have turned away from the Bible altogether by the false impression that it bounds the conscience of the believer to the 24-hour Day theory?”

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