

NOAH'S FLOOD: ITS DATE, EXTENT, AND DIVINE ACCOMMODATION

PAUL H. SEELY

As one surveys evangelical literature on the Flood, it is evident that two camps dominate evangelical thinking: concordism and creation science. The former believes the Flood was local, not covering much more than Mesopotamia, and the latter believes it was global. Those who believe in a global flood argue almost completely from the biblical data while offering questionable reinterpretations of the scientific data, and those who argue for a local flood argue almost completely from scientific data while offering questionable reinterpretations of the biblical data. Both camps believe they are following the description of the Flood given in the Bible. As we shall see, however, neither camp is completely following the biblical description of the Flood, and both fail to harmonize the account with modern science. A third approach is needed.

I. The Date of the Flood

It is common knowledge that the biblical genealogies cannot be used for chronological purposes because names may have been left out of them. One can, however, still make a rough chronological estimate for the date of the Flood by employing the two ten-name genealogies in Gen 5 and 11. The genealogy in Gen 5 begins with Adam, who is clearly described as a farmer in a garden (Gen 2:15) and who after his expulsion from the garden continues to do the very same kind of work (Gen 3:23 and 2:5, 15). Genesis 4:1, 2 in the light of 4:25 imply that Cain and Abel were contemporaries of Adam. Since Adam and Cain were farmers and Abel a shepherd, and neither domesticated crops nor domesticated sheep or goats appear in the archaeological record until c. 9000 B.C., Adam's earliest possible date is c. 9000 B.C.¹

Adam's probable date, however, appears to be later. Genesis 2:8 tells us that God planted a garden (see 9:20; 21:33; Lev 9:23) that had fruit trees (2:9, 16; 3:2, 7). The implication of the words "plant" and "garden" are that the fruit

Paul H. Seely is an independent scholar specializing in biblical history and the relationship of science to Scripture.

¹ David C. Hopkins, "Agriculture," *OEANE* 1:23; Brian Hesse, "Animal Husbandry," *OEANE* 1:140-41; Naomi F. Miller, "The Near East," in *Progress in Old World Palaeoethnobotany* (ed. Willem Van Zeist, Krystyna Wasylikowa, and Karl-Ernst Behre; Rotterdam: A. A. Balkema, 1991), 136, 150. The domestication of plants may have occurred somewhat earlier than 9000 B.C. but probably not significantly earlier because it had to wait until the cold, dry climate of the preceding ice age gave way to a warmer and wetter climate.

trees are domesticated fruit trees. Adam has to "work" the garden (2:15), but he does not have to domesticate wild trees. The context suggests that even after his expulsion from the garden, he still had domesticated fruit trees. After he is expelled from the garden his work is harder, but the crops he is raising do not turn wild, thus necessitating their redomestication. He raises domesticated grasses immediately, and Abel raises domesticated sheep. The picture painted suggests that domesticated fruit trees were just as available after Adam's fall as domesticated grasses. It would be contrary to the thrust of the context to suppose otherwise.

We must therefore ask, When did domesticated fruit trees first appear in the archaeological record? The answer is in the fourth millennium B.C.² Adam should probably, therefore, be dated c. 4000 B.C., possibly earlier but probably not earlier than 5000 B.C.

At the other end of the two genealogies in Gen 5 and 11, we find Abraham (Gen 11:27) who can be dated to approximately 2000 B.C. The time from Adam to Abraham thus covers approximately 3000 years, or if Adam's earliest possible date (9000 B.C.) is employed, 7000 years at most. Since Noah and his sons are the last people in the first genealogy and Shem is the first in the second, both genealogies are placing the Flood in the middle of the two-genealogy time span of 3000 (7000 at most) years. If the two genealogies each cover the same amount of time, the Flood would be dated at c. 3500 B.C. (5500 B.C. at most).

The earlier genealogy, however, may well have more names missing from it than the later one, because over time it is the earlier persons named who lose their importance and are forgotten or become socially irrelevant and hence are dropped from the genealogy.³ Accordingly, more time probably elapsed from Adam to the Flood than from the Flood to Abraham. So, the time from the Flood to Abraham is probably less than 1500 years (or 3500 years). One cannot say how much less, but at least 500 years would seem to be in order, making the earliest probable date for the Flood c. 3000 B.C. and the earliest possible date c. 5000 B.C.

One must also consider the tools and technological skills available for building an ark. It is possible that the ark could have been built with Neolithic stone axes; but considering the precision of shaping necessary for its decks and door, the extensive internal bracing, and the need for strong fittings and fasteners to hold a three-story boat together, it is more probable that metal axes and other metal tools along with some metal fittings were used. This also fits more smoothly with the "cutting instruments of brass and iron" of Gen 4:22 than does a Neolithic scenario.

When then do metal axes and other metal tools appear in the archaeological record? The answer is that, although very small copper objects such as awls and beads have been found as early as the eighth millennium B.C., copper mining

² Jane M. Renfrew, "Vegetables in the Ancient Near East Diet," *CANE* 1:192; Daniel Zohary and Maria Hopf, *Domestication of Plants in the Old World* (2d ed.; Oxford: Clarendon, 1993), 134.

³ Robert R. Wilson, *Genealogy and History in the Biblical World* (New Haven: Yale University Press, 1977), 34-35.

and tool-making do not seem to begin before c. 5000 B.C.⁴ Thus, the probable use of copper (copper-alloy) tools to build the ark indicates that the earliest date for the Flood is c. 5000 B.C.

This brings us to the clearest and most sure indication of the date of the Flood. Soon after the Flood, Noah "planted a vineyard" (Gen 9:20).⁵ This action cannot antedate the beginning of cultivated grapes. By looking for large quantities of grape seeds on archaeological sites, the charred remains of the vine, and particularly the thinner pear-shaped grape seeds that distinguish cultivated grapes from wild ones, paleobotanists have been able to trace the beginning of viticulture to the fourth millennium B.C., with the possibility of its being a few centuries earlier.⁶ This dating is confirmed by the fact that although evidence of various cereals and vegetables have often been found at sites dated to the ninth through the fifth millennia, evidence of grapes is scant on these earlier sites and never clearly indicates domesticated grapes. On the other hand, evidence of domesticated grapes is found abundantly and widespread at sites after 4000 B.C. and especially after 3000 B.C.

We can see then from the above evidence that, even if we dated Adam around 9000 B.C., the Flood as it is described in Gen 6-9 does not antedate 5000 B.C., and the probable use of metal tools indicates this same upper limit for the date of the Flood. Noah's vineyard strongly indicates that the Flood probably does not antedate c. 4000 B.C. Since Adam should probably be dated no earlier than c. 5000 B.C., the combined genealogies of Gen 5 and 11 with the Flood at a midpoint between Adam and Abraham suggest a date c. 3500 to 3000 B.C. for the Flood. This dating seems to be confirmed by the fact that nothing approaching the size of the ark, whether buildings or boats, appears in the archaeological record before c. 3500 B.C. Since the Flood must occur before the Tower of Babel, and the Tower of Babel cannot be later than c. 2300 B.C., this is the latest possible date for the Flood.⁷ Taken together, the biblical and archaeological evidence indicate that the Flood most probably occurred between c. 4000 B.C. (5000 B.C. at the earliest) and 2300 B.C.

II. *The Extent of the Flood according to Scripture*

The biblical arguments for a local Flood consist for the most part of simply pointing out that the words "all" (כָּל) and "earth" (אֶרֶץ) in the Flood account

⁴ James D. Muhy, "Mining and Metalwork in Ancient Western Asia," *CANE* 3:1503; Peter R. S. Moorey, *Ancient Mesopotamian Materials and Industries* (Winona Lake: Eisenbrauns, 1999), 248-50.

⁵ Noah died 350 years after the Flood (Gen 9:28), so the vineyard would have to be dated quite close to the time of the Flood. The flood account in Gilgamesh is similar in that it mentions wine being taken aboard the ark (11:72-73).

⁶ Naomi F. Miller, "Viticulture," *OANE* 5:305; Daniel Zohary, "The Domestication of the Grapevine *Vitis Vinifera* L. in the Near East," in *The Origins and Ancient History of Wine* (ed. Patrick McGovern, Stuart Fleming, and Solomon Katz; Amsterdam: Gordon Breach, 1996), 28-29; Zohary and Hopf, *Domestication of Plants*, 148-49.

⁷ Sargon I is said to have destroyed the city of Babylon c. 2340 B.C., and Sharkalisharri repaired the ziggurat there c. 2200 B.C. Evelyn Klengel-Brandt, "Babylon," *OANE* 1:254.

can mean respectively "some" and "a limited area of the earth." And this is correct. The phrase "upon the face of all the earth" describing the extent of the flood waters in Gen 8:9 is used in 2 Sam 18:8 to describe the extent of a battle which did not cover even the Near East, much less the whole globe. Second Samuel 18:8 also shows that the word אֶרֶץ can mean simply "land" without being modified by a genitive such as "land of Canaan" or "land of Egypt." Even the use of a double "all" as in Gen 7:19 ("all the high mountains that were under all the heavens were covered") does not prove the flood was global, because a double "all" is used in Dan 6:25 [26] telling how King Darius wrote a letter to "all the peoples, nations and tongues who live in all the earth," and certainly this does not include the entire globe.

Nor does the mention of "mountains" per se in Gen 7:19 prove that the flood was global, for the Hebrew word הָר (mountain) can refer simply to hills as in Deut 11:11. The KJV, in fact, translates Gen 7:19 as "all the high hills."

Some other arguments used by those holding to a global flood, such as the large size of the ark or the making of an ark at all or the yearlong duration of the Flood, cannot be pressed as proving that the Flood was global. These arguments tend to imply a flood greater in extent than a local flood, but they fall short of being conclusive.⁸ Those holding to a local flood cannot be entirely faulted for rejecting these arguments. At the same time believers in a local flood have failed to take into consideration all of the biblical evidence. The local flood theory is based upon a selective approach to the biblical data, and it loses its validity when all of the data are given their contextual interpretation. As we shall see, the Bible is quite clear that it is not describing a flood limited to Mesopotamia.

III. The Phrase "under all the heavens"

Genesis 7:19 says with reference to the waters of the Flood that "all the high mountains that were under all the heavens were covered."⁹ Although "all the high mountains" can be used to refer to hills in a limited area (Jer 3:6), when the phrase "under all the heavens" is added to the description, it does not refer to an area less than the entire earth as it was then conceived, that is, the greater Near East. The phrase "under all the heavens" is used six other times in the OT (Deut 2:25; 4:19; Job 28:24; 37:3; 41:11 [3]; Dan 9:12). In every case the phrase refers to the entire earth as it was then conceived. Some have questioned the extent of the earth as mentioned in Job 37:3 and in Deut 2:25, so these passages must be discussed.

Job 37:3 reads, "Under all the heavens he lets it loose; and his lightning unto the corners (or edges) of the earth." It has been argued that surely lightning is not seen from one end of the earth to the other, so "earth" in this verse must mean just "land." But the point of the verse is the greatness of God and the

⁸ See Ronald Youngblood, *The Book of Genesis* (2d ed.; Grand Rapids: Baker, 1991), 106-14.

⁹ It is sometimes argued that Gen 7:19 and similar statements reflect Noah's viewpoint, simply describing the earth so far as he could see it, but the implication of Gen 8:8, 11, 13 is that Noah could not see the world around him until after the end of the Flood.

storm. Accordingly, "unto the corners (or edges) of the earth" is a fitting hyperbole referring to the edges of the earth-disc, that is, the earth as it was then conceived.¹⁰ This interpretation is confirmed by the fact that in Ps 97:4, which is parallel to Job 37:3, the thought of Job 37:3 is clearly expressed in universal terms: God's lightning "lit up the world (תכל)." Where the context is clear, תכל is always universal in the Psalms, and the universality of ארץ in Ps 97:1 and 5 implies the universality of ארץ and תכל in v. 4.

At the same time local flood advocates are correct in saying that Job 37:3 is not speaking of a global earth, for only on a flat earth can lightning be imagined as being seen from one edge of the earth to the other. And in Job 38:13, which is in the midst of a context where "earth" is used twice in a universal sense (Job 38:4, 18), the earth is compared to a blanket picked up by the edges, which shows again that the OT view of the earth as flat is employed in Job.¹¹

Deuteronomy 2:25 reads, "This day will I begin to put the dread of thee and the fear of thee upon the peoples that are under the whole heaven, who shall hear the report of thee, and shall tremble, and be in anguish because of thee." Local flood advocates are again correct in saying that this verse can scarcely apply to a global earth since surely the Chinese, Native Americans, and Australian aborigines would not hear the report and tremble. At the same time, the entire earth as it was then conceived is in view. Nahum 3:19 mentions "all who hear the report" of the downfall of Assyria, implying that such a report could go from Assyria near the eastern boundary of the known earth over to the area of the Mediterranean sea (1:4) near the western boundary of the known earth. So, Deut 2:25, though hyperbolic, is easily universal, envisioning the report covering the entire earth as it was then conceived.

I conclude that the phrase "under all the heavens" in Gen 7:19 refers to the *entire* earth as it was then conceived. Archer says this phrase has constrained the most careful exegetes from conceding "the exegetical possibility of interpreting Gen 7 as describing a merely local flood."¹²

IV. Other Biblical Evidence of the Universality of the Flood

The statement of Gen 7:19 that water covered "all the high mountains under all the heavens" contextually includes the high mountains under the heavens of the country of Ararat (Gen 8:4), ancient Urartu which centered around Lake Van. Since the country of Ararat was thought to have been located at the northern extent of the earth (Gen 10:2; Ezek 38:6) at the "the nether end of the known world," it is not just Mesopotamia but the entire extent of the earth as it was then conceived that is in view.¹³ The scenario being painted is universal.

¹⁰ Paul H. Seely, "The Geographical Meaning of 'Earth' and 'Seas' in Gen 1:10," *WTJ* 59 (1997): 231-55.

¹¹ Ibid. See also Robert J. Schneider, "Does the Bible Teach a Spherical Earth?" *Perspectives on Science and Christian Faith* 53 (2001): 159-69.

¹² Gleason Archer, Jr., *A Survey of Old Testament Introduction* (Chicago: Moody, 1994), 216.

¹³ William White, Jr., "Ararat," *NIDBA*, 43.

Also, Gen 7:19 must be interpreted in the context of 7:17-20 and 8:3-5, which draw a picture of the ark's rising higher as the Flood waters rose higher (vv. 17-18) until "all the high mountains under all the heavens," including the mountains of Ararat (Gen 8:3, 4), were covered, apparently fifteen cubits over their peaks (v. 20). Then as the waters receded the ark fell until it came to rest upon the mountains of Ararat (8:3, 4). Since the mountains of Ararat are 8000 feet high on average and were covered with water, the hydrological implication is that the rest of the known world was also covered with water to the same depth.

In addition, although the ark is said to come to rest on the "mountains" (plural) of Ararat rather than on a particular peak like Mt. Ararat, Gen 8:3-5 implies that the ark landed very high up in the Ararat mountains, because after the ark grounded the water had to recede for another two and a half months before the tops of the surrounding mountains became exposed. It is perhaps possible that the ark did not land on what is now called Mt. Ararat, but it must have landed on some higher-than-average mountain in Urartu or else the tops of the surrounding mountains would have been exposed much sooner. Genesis 8:3-5 thus implies that the water was even deeper than 8000 feet.¹⁴

The fact that *all* birds died in the Flood, leaving alive *only* Noah and those with him on the ark (Gen 7:21-23) makes it clear that the Flood was not local. In a local flood a small minority of birds might die, but most of them would fly away to dry land.

A number of verses also imply that all humans died in the Flood. The close association of the humans to be destroyed by the Flood with the humans that God created (Gen 6:6, 7); the sentence, "the intent of man's heart is evil from his youth," (Gen 8:21); the prohibition of murder based on the image of God in man (Gen 9:6); and God's covenant with Noah and his descendants with the rainbow as a sign (Gen 9:13-17) all suggest that the Flood was anthropologically universal.

Most telling is the fact that Noah is treated in Gen 9 as a new Adam, a new beginning for mankind. The cultural mandate and the command to multiply and fill the earth originally given to Adam (Gen 1:26-28) are repeated to Noah (Gen 9:1, 2, 7). The granting of the herb to Adam for food (Gen 1:29, 30) is repeated to Noah and extended to include animals (Gen 9:3). Very tellingly, Noah is addressed as if he were Adam: "As I gave the green plant to *you*. . . ." This plus the universality of God's commitments and commands in Gen 8:21, 22; 9:6, 7 indicate that Noah is taking the place of Adam for a new beginning of mankind. As Kenneth Mathews says, "It is not surprising then that the narrative goes to great lengths to depict Noah as the new Adam. . . . The Noahic covenant's common allusions to 1:1-2:3 show that Noah is the second Adam who heads the new family of humanity. . . ."¹⁵

¹⁴ A topological survey of 170 mountains within a radius of 250 miles of Lake Van, that is, within the borders of Urartu, shows an average height of 8000 feet with half a dozen mountains around 12,000 feet and Mt. Ararat the highest at 17,000 feet.

¹⁵ Kenneth Mathews, *Genesis 1-11:26* (Nashville: Broadmans, 1996), 351, 398. The fact that Noah is taking the place of Adam as a new beginning for mankind has been widely recognized for

Similarly, Gen 9:19 and 10:1-32 teach that the peoples of all the countries in the then known world descended from one of the sons of Noah. These verses imply that the Flood was anthropologically universal and covered the entire earth as it was then conceived.¹⁶

That the Bible is describing the Flood as covering the entire earth as it was then conceived is perhaps most conclusively seen in the fact that the primeval ocean of Gen 1:2, half of which was placed above the firmament on the second day of creation (Gen 1:6, 7) and half of which was placed around and under the earth on the third day of creation (Gen 1:9, 10; Job 26:10; Pss 24:2; 136:6; Prov 8:27b) comes back from above the firmament and from below the earth (Gen 7:11; cf. 8:2) to again cover the earth with water.¹⁷ The Flood is thus described as reversing earth's creation. This is cosmic, clearly universal, not local. During the Flood, the earth virtually goes back to its pre-creation state in Gen 1:2. Evangelical OT scholars regularly make this point.

Victor Hamilton, for instance, remarks, "There is no doubt that the two sources of water are intended to recall the 'waters above and below' of 1:6-7. The Flood un-creates, and returns the earth to a pre-creation period when there was only 'waters.'"¹⁸

Similarly Kenneth Mathews writes, "The language of destruction in the flood narrative, such as the eruption of the 'great deep' and the 'floodgates of the heavens' (7:11), shows a reversal of creation days one through three (1:1-13). It is the *uncreation* of Adam's old world."¹⁹

John Walton says, "The Flood recreates the watery chaos of Genesis 1:2," and he goes on to cite Brown approvingly, "The flood has the focused aim of bringing creation back to the drawing board by means of a *controlled* cosmic meltdown, or more accurately dissolution."²⁰

centuries, e.g., "Noah was the beginning of our race" (Justin Martyr, *Dial* 19, *ANF* 1:204); "Noah, the second father of mankind" (Charles John Ellicott, *Ellicott's Commentary on the Whole Bible* [c. 1863; repr., Grand Rapids: Zondervan, 1959], 1:44); "the second origin of the human race" (Benjamin B. Warfield, "The Biblical Idea of Revelation," in *The Inspiration and Authority of the Bible* [Philadelphia: Presbyterian & Reformed, 1948], 78); "Adam the father of all humanity and Noah its father in the post-diluvian world" (Bruce Waltke, *Genesis* [Grand Rapids: Zondervan, 2001], 127); "Noah is a second Adam," Victor Hamilton, *The Book of Genesis Chapters 1-17* [Grand Rapids: Eerdmans, 1990], 313).

¹⁶ Gen 10 reflects the entire earth as it was then conceived, stretching in modern terms from around Sardinia to Afghanistan and from the Black Sea to the Gulf of Aden. See the map in Carl G. Rasmussen, *Zondervan NIV Atlas of the Bible* (Grand Rapids: Zondervan, 1989), 71, and in Yohanan Aharoni and Michael Avi-Yonah, *The Macmillan Bible Atlas* (New York: Macmillan, 1968), 21.

¹⁷ Paul H. Seely, "The Firmament and the Water Above, Part II: The Meaning of 'The Water above the Firmament' in Gen 1:6-8," *WTJ* 54 (1992): 31-46, and "The Geographical Meaning," esp. the latter half of the paper.

¹⁸ Hamilton, *The Book of Genesis*, 291.

¹⁹ Mathews, *Genesis*, 351; see 376.

²⁰ Walter Brown, *The Ethos of the Cosmos* (Grand Rapids: Eerdmans, 1999), 54, cited in John H. Walton, *Genesis* (Grand Rapids: Zondervan, 2001), 331.

Bruce Waltke explains, "The earth is being returned to its precreation chaos by the release of the previously bounded waters above and by the upsurge of the subterranean waters (see 1:2, 6-9; 8:2)."²¹

Gordon Wenham likewise writes, "In releasing the waters pent-up below and above the earth, God is undoing his great acts of separation whereby the dry land was created and the waters were confined in the seas (Gen 1:9). The earth is going back to Gen 1:2, when the waters covered its face."²²

The consensus of evangelical OT scholars is that the Flood was a cosmic event, returning the earth virtually to its pre-creation condition in Gen 1:2. The Flood is thus clearly universal, not local.

In conclusion, the phrase "under all the heavens," the covering of the genuinely high mountains of Ararat, the death of all the birds, the various universals (e.g., the rainbow as a sign) implying the death of all mankind, the painting of Noah as a second Adam, the entire earth of Gen 10 being repopulated by the sons of Noah, and the return of the primeval Deep from above the firmament and below the earth so that the earth is virtually returned to its pre-creation state in Gen 1:2 all make it clear that the biblical account is not describing a flood limited to Mesopotamia or to an area as small as the Black Sea, but rather one that covered the entire earth *as it was then conceived*, the area we might now call the greater Near East.

V. Was the Flood Global?

Given that the biblical account is describing a flood that covered the greater Near East to well over 8000 feet and that water seeks its own level, it is logical to conclude that the Flood must have covered the entire globe even though the entire globe is not in view in the OT. Geologists, however, including the majority of Christian geologists, do not believe there is evidence for a global flood. Davis Young, a Christian geologist, points out that intensive efforts have been made for the last hundred years to find physical evidence for the Flood, yet outside of finding silt deposits along the rivers in the Near East, all such efforts "have completely failed."²³ Glenn Morton, another Christian geologist, has noted that, if there had been a global flood five to seven thousand years ago, there is no way all of its erosional effects and deposits would have disappeared in the interim, since we can see the erosional effects and remaining deposits from floods in the Snake River valley 18,000 years ago and from the Altai mountains from about the same time.²⁴ The absence of such erosional effects and deposits, therefore, testifies that there was no global Flood.

Even more importantly, Morton has pointed out that there are no fluvial or marine Holocene (c. 9000 B.C. to the present) rocks in northern Mesopotamia

²¹ Waltke, *Genesis*, 139.

²² Gordon Wenham, *Genesis 1-15* (Waco, Tex.: Word, 1987), 181.

²³ Davis Young, *The Biblical Flood* (Grand Rapids: Eerdmans, 1995), 225.

²⁴ Personal communication. See also A. N. Rudoy and V. R. Baker, "Sedimentary Effects of Cataclysmic Later Pleistocene Glacial Outburst Flooding, Altay Mountains, Siberia," *Sedimentary Geology* 85 (1993): 53.

except along the river beds, and this indicates that, except for riverine floods, only southern Mesopotamia at best was flooded in the last 11,000 years.²⁵ The geological evidence thus testifies against a global flood.

In addition, the GISP2 (Greenland Ice Sheet Project 2) ice core from the ice sheet on Greenland has annual layers going back tens of thousands of years. The very close agreement of three independent, seasonally based, non-radiometric indicators of annual layers makes the age of the ice sheet on Greenland indisputably 40,000 years old, and the close agreement of two of these independent indicators makes its age very probably about 110,000 years old. Yet close examination shows that the ice core is composed of fresh water from top to bottom. There is not a single layer of ice in it or in the ground under it composed of marine water nor any silt deposits such as a flood would leave. No ocean water has stood over it or under it, and obviously the ice sheet was not floated away by a flood anytime in the last 40,000 or even 110,000 years. Consequently, the GISP2 ice core falsifies the idea that there was a global flood in the time of Noah.²⁶

Given the probable date of the Flood, we can also ask the question, Is there any archaeological evidence for a Flood in the Near East between 4000 (or 5000 at the earliest) and 2300 B.C.? The short answer is that the only evidence of serious flooding in the Near East during that time period is from riverine floods. And since the biblical account is describing a flood much more extensive than that, we have no archaeological evidence for the Flood as it is described in Scripture.

In addition, since even local riverine floods normally leave some evidence by way of silt layers, a year-long flood (Gen 7:11; 8:13-14) covering all the high mountains (Gen 7:19) from around Sardinia to Afghanistan and from the Black Sea to the Gulf of Aden (Gen 9:19; 10:32) would certainly have left physical evidence in the tells of the Near East. These tells should all show a silt layer or at least a sterile layer dating to the same time period throughout the Near East. The walls of mud brick buildings, which are found on most sites, should show serious water erosion, and this erosion should appear at the same time period throughout the Near East. Also, if the Flood destroyed all but eight people, most of these tells should show a long period of vacancy following their silt or sterile layer, while the population regrew and expanded.

Yet, when tells in the Near East which date from 5000 to 2300 B.C. are examined, no evidence of such a flood is found.²⁷ In fact, overlapping layers of occupation, one on top of the other, often with the remains of mud-brick houses in

²⁵ M. H. Metwalli et al., "Petroleum Bearing Formations in Syria and Iraq," *AAPG Bulletin* (Sept 1974): 1782, fig. 3, and see cross section, p. 1791.

²⁶ Paul H. Seely, "The GISP2 Ice Core: Ultimate Proof that Noah's Flood was not Global," *Perspectives on Science and Christian Faith* 55 (2003): 252-60.

²⁷ The clearest archaeological evidence of a simultaneous flood in Mesopotamia is found only in southern Mesopotamia where simultaneous silt deposits are found at Kish, Shuruppak, and Uruk c. 2900 B.C. See Jack Finegan, *Archaeological History of the Ancient Middle East* (Boulder, Colo.: Westview, 1979), 25; Max Mallowan, "Noah's Flood Reconsidered," *Iraq* 26 (1964): 62-82.

place, are found intact spanning the entire period. In other words, not only is there no evidence of a flood that covered the Near East, there is archaeological evidence that no flood covered the Near East or even all of Mesopotamia between 5000 and 2300 B.C. As the Near Eastern archaeologist Mallowan observes, "No flood was ever of sufficient magnitude to interrupt the continuity of Mesopotamian civilization."²⁸ No matter what specific date one might put on the flood between 5000 and 2300 B.C., there were sites in the Near East at that time where people lived and remained undisturbed by any flood.

Looking at the period from 5000 to 4000 B.C., Byblos, for example, was continuously occupied from 6000 to 4100.²⁹ Tepe Yahya in Iran has a continuous cultural sequence from 5500 to 4000.³⁰ Ugarit in Syria shows continuous occupation from 5000 to 4000.³¹ Merimde in Egypt shows nearly continuous occupation from 5000 to 4000.³² Teleilat el-Ghassul and Shiqmim in Palestine both show continuous occupation from 4500 to 4000.³³ Not only were these cities untouched by a flood, cities right in Mesopotamia were untouched. There is an unbroken cultural sequence at 'Oueili in southern Mesopotamia from c. 5500 to c. 3800.³⁴ Tell al-Ubaid has an unbroken cultural sequence from 5000 to 4500.³⁵ From 4500 to 4000 Ur was untouched.³⁶ These untouched cities all testify that no serious flood interrupted the civilization of the Near East from 5000 to 4000 B.C. even in southern Mesopotamia.

From 4000 to 3000 B.C. the picture is no different. Arslantepe, Beycesultan, and Alaca Hüyük in Turkey show continuous occupation from before 4000 until after 3000.³⁷ Ugarit in Syria continued to be occupied from 4000 to 3000.³⁸ Occupation at Abydos and at El-Omari in Egypt spans 4000 to 3000.³⁹

²⁸ Mallowan, "Noah's Flood Reconsidered," 81.

²⁹ Jak Yakar, *Prehistoric Anatolia* (Jerusalem: Tel Aviv University, 1991), 86; Martha Sharp Joukowsky, "Byblos," *OEANE* 1:291.

³⁰ Carl C. Lamberg-Karlovsky and Thomas Wight Beale, *Excavations at Tepe Yahya, Iran 1967-1975* (Cambridge, Mass.: Peabody Museum, 1986), 94, 217.

³¹ Adrian Curtis, *Ugarit* (Grand Rapids: Eerdmans, 1985), 41; Margurete Yon, "Ugarit," *OEANE* 5:258.

³² Michael Hoffman, *Egypt before the Pharaohs* (New York: Knopf, 1979; repr., New York: Dorset, 1990), 169.

³³ J. Basil Hennessy, "Teleilat El-Ghassul," *OEANE* 5:161; Thomas E. Levy, "Shiqmim," *OEANE* 5:34. Both continue into the fourth millennium.

³⁴ Jean-Louis Huot, "Ubaid," *OEANE* 5:251.

³⁵ *Ibid.*

³⁶ Susan Pollock, "Ur," *OEANE* 5:288; Roger Matthews, "Ur," *Dictionary of the Ancient Near East* (ed. Piotr Bienkowski and Alan Millar; Philadelphia: University of Pennsylvania Press, 2000), 309.

³⁷ Seton Lloyd, *Early Highland Peoples of Anatolia* (London: Thames & Hudson, 1967), 140; Ian Shaw, "Beycesultan," *A Dictionary of Archaeology* (ed. Ian Shaw and Robert Jameson; Oxford: Blackwell, 1999), 115; Marcella Frangipane, "Centralization Processes in Greater Mesopotamia," in *Uruk Mesopotamia and Its Neighbors* (ed. Mitchell S. Rothman; Santa Fe: School of American Research Press, 2001), 326-27; Marcella Frangipane, "Arslantepe," *OEANE* 1:213-14.

³⁸ Curtis, *Ugarit*, 41; Yon, "Ugarit," 258.

³⁹ Günter Dreyer, "Recent discoveries at Abydos Cemetery U," in *The Nile Delta in Transition: 4th-3rd Millennium B.C.* (ed. Edwin C. M. van den Brink; Tel Aviv, Israel: E. C. M. van den Brink, 1992), 293-95; A. Jeffrey Spencer, *Early Egypt* (Norman: University of Oklahoma, 1993), 22; Hoffman, *Egypt before the Pharaohs*, 200.

Tepe Yahya continued to be occupied from 4000 to 3300.⁴⁰ At Susa in Iran there is continuous occupation from 4300 to 3100.⁴¹ Uruk in Mesopotamia and perhaps more importantly the many cities of the "Uruk Expansion" from Iran to Turkey were untouched from 4150 to 3100.⁴² Although there is a partial flood deposit at Ur, the city was apparently never completely covered by flood waters at any time between 4000 and 3000.⁴³ Jemdet Nasr in southern Mesopotamia was occupied from c. 4000 to 2800.⁴⁴

There are then a number of cities in the Near East which together spanned the period from 5000 to 3000 B.C. with continuous occupation. And right in Mesopotamia itself Eridu in the south was continuously occupied from c. 5200 to 3400, and Tepe Gawra in the north shows a nearly continuous cultural sequence from 5000 to 3100.⁴⁵ Nippur in south central Mesopotamia was occupied from before 5000 until after 3000.⁴⁶ Armstrong thus says of ancient Mesopotamia: "We can say, however, that from Ubaid 0 [6200 B.C.] on, there is a demonstrable continuity of material culture, particularly evident in the architectural and ceramic remains, into historical times."⁴⁷

Since cities in Mesopotamia and the Near East became ever larger and more numerous from "historical times," that is, 3000 B.C. on, no one familiar with ancient Near Eastern archaeology supposes that even Mesopotamia much less the entire Near East was covered by a flood later than 3000 B.C. Consequently, we can see from the archaeological data that the description of the extent of the flood in Gen 6-9 is not at all supported by archaeology. It is, in fact, falsified by archaeology.

If one abandons the biblical indications of the probable date of the Flood, and its date is pushed back earlier than 5000 B.C. but not before its earliest possible point, c. 7500 B.C. (9000 as the earliest possible date for Adam less the years of the genealogy in Gen 5), there are Near Eastern sites in every millennium from well before 7500 which have overlapping continuous occupation untouched by a

⁴⁰ Carl C. Lamberg-Karlovsky, "Tepe Yahya," *OEANE* 5:187.

⁴¹ Daniel T. Potts, *The Archaeology of Elam* (London: Cambridge University Press, 1999), 46, 84; Frank Hole, ed., *The Archaeology of Western Iran: Settlement and Society from Prehistory to the Islamic Conquests* (Washington, D.C.: Smithsonian Institution, 1987), 165; Holly Pittman, "Susa," *OEANE* 5:106-8.

⁴² Henry T. Wright, "Cultural Action in the Uruk World," in *Uruk Mesopotamia and Its Neighbors*, 125.

⁴³ John Bright, "Has Archaeology Found Evidence of the Flood?" *BA* 5 (1942): 57; Pollock, "Ur," 288. However, Jonathan Clarke, a Christian geologist, informs me that silt deposits only give a minimum extent for a flood because shallow waters at the periphery do not deposit much silt, and what they do deposit may be so thin that it would not be recognizable. In short, Ur may have been covered completely by a local flood.

⁴⁴ R. J. Matthews, "Jemdet Nasr," *OEANE* 3:212.

⁴⁵ Joan Oates, "Ur and Eridu, the Prehistory," *Iraq* 22 (1960): 44; Jean-Claude Margueron, "Eridu," *ABD* 2:573; Mitchell S. Rothman, "Tepe Gawra," *OEANE* 5:183-85; Ian Shaw, "Gawra, Tepe," *A Dictionary of Archaeology*, 249.

⁴⁶ Piotr Bienkowski, "Nippur," *Dictionary of the Ancient Near East*, 214.

⁴⁷ James Armstrong, "Mesopotamia," *The Oxford Companion to Archaeology* (ed. Brian M. Fagan; New York: Oxford University Press, 1996), 453. See Baruch Brandl, "Eridu," *OEANE* 2:259, and Mallowan above (see n. 28).

flood down to 5000 B.C. These include Abu-Hureyra in Syria (c. 9500 to c. 5000),⁴⁸ Çayönü in southeastern Turkey (c. 9700 to 5850),⁴⁹ Jericho (8500 to 7200; 7000 to 6000),⁵⁰ Khirokitia in Cyprus (c. 7000 to 6000),⁵¹ Çatal Hüyük in Turkey (c. 7000 to 6250),⁵² Hacilar in Turkey (c. 6270 to 5440 cal),⁵³ Maghza-liyah in Mesopotamia (6500 to 6000),⁵⁴ Mehrgarh in Pakistan (7000 to 3000),⁵⁵ numerous Halaf communities in Mesopotamia, Syria, and Turkey (6100 to 5400),⁵⁶ Ugarit in Syria (6000 to 5000),⁵⁷ Arpachiyah in Mesopotamia (5800 to 5100),⁵⁸ and Chogha Mish in Iran (6000 to 4200).⁵⁹

Thus the Christian archaeologist Howard Vos conservatively wrote, "After the 6th or 5th millennium B.C., there is no break brought on by a flood or any other catastrophe in Near Eastern civilization. And, in fact excavations at Jericho in Palestine and Jarmo in Iraq push undisturbed remains at these sites back into the 8th millennium B.C."⁶⁰

With regard to the archaeological impossibility of a universal flood in this time period, the very conservative R. Laird Harris particularly emphasized the mud brick buildings at Jericho: "The city of Jericho is far older than the pyramids and lies at the bottom of the deepest valley on earth. Its early mud brick buildings would hardly have outlasted a universal flood."⁶¹

One might add that the mud brick buildings not only in Jericho but throughout the entire Near East would hardly have outlasted a universal flood. Yet, in the tells named above and in hundreds of others, the remains of mud brick buildings show no evidence of having simultaneously undergone a flood. Many of them show no evidence of any flood at all. Cultures throughout the Near East slowly changed, and some sites even suffered through local floods; however, there are continuous cultural sequences that overlap each other from 9500 to 3000 B.C. and down into the times of the patriarchs and later.

⁴⁸ Andres M. T. Moore, G. C. Hillman, and A. J. Legge, *Village on the Euphrates* (Oxford: Oxford University Press, 2000), 491-93.

⁴⁹ Mehmet Ozdogan, "Çayönü," *OEANE* 1:444. I have changed the dates given to calibrated dates since I have striven throughout to give calibrated dates.

⁵⁰ Amihai Mazar, *Archaeology of the Land of the Bible* (New York: Doubleday, 1990), 38.

⁵¹ Vassos Karageorghis, *Cyprus from the Stone Age to the Romans* (London: Thames & Hudson, 1982), 26.

⁵² Yakar, *Prehistoric Anatolia*, 27, 30.

⁵³ Ibid., 166. In his article on Hacilar in *OEANE*, Yakar indicates dates of 6000 to 5000 B.C., but these seem to be uncalibrated dates.

⁵⁴ Jean-Louis Huot, "The First Farmers at 'Oueili,'" *BA* 55 (1992): 189.

⁵⁵ Frank R. Allchin and Bridget Allchin, "Prehistory and the Harappan Era," *The Cambridge Encyclopedia of India* (ed. Francis Robinson; Cambridge: Cambridge University Press, 1989), 71; Dilip K. Chakrabarti, *India: An Archaeological History* (New York: Oxford University Press, 1999), 126-36.

⁵⁶ Stuart Campbell, "The Halaf Period in Iraq: Old Sites and New," *BA* 55 (1992): 182, 187.

⁵⁷ Yon, "Ugarit," 258.

⁵⁸ Ismail Hijjara, *The Halaf Period in Northern Mesopotamia* (London: Nabu, 1997), 15, 111, table 11.

⁵⁹ Pittman, "Susa," 108.

⁶⁰ Howard Vos, "Flood (Genesis)," *ISBE* 2:318. See Thomas A. Holland, "Jericho," *OEANE* 3:221, and Clyde Thompson, *A Geologist Looks at Genesis* (New York: Vantage, 1976), 184-85, 189.

⁶¹ R. Laird Harris, "The Length of the Creative Days in Genesis 1" in *Did God Create in Six Days?* (ed. Joseph A. Pipa, Jr., and David W. Hall; Taylors, S.C.: Southern Presbyterian, 1999), 104.

The empirical data of geology, glaciology, and archaeology, as interpreted by virtually all scientists qualified in these areas of study including the great majority of qualified Christian scientists, clearly testify that no flood covered the entire globe or even the entire Near East (the "earth" of Gen 6-10) at any time in the last 11,000 years. Glaciology and geology agree that there was no global Flood at any time in the last 100,000 years and more. Geology, glaciology, and archaeology thus falsify the extent of the Flood as it is described in Gen 6-9.

VI. *The Divine Accommodation in Genesis 6-9*

This presents the question: If the biblical account is *wie es eigentlich gewesen*, as Ranke put it, or in popular terms, a VCR account showing exactly what actually happened, why is the description of the Flood in the Bible not validated instead of falsified by the empirical data? The answer very simply is that the description of the Flood in the Bible is not a VCR account. It is, rather, an account accommodated to "the notions which then prevailed," to use one of Calvin's phrases.⁶²

In the first place and most obviously, the account is accommodated to the geography of the times. The "whole earth" of Gen 8:9 that was flooded is clearly the *entire* earth as far as the biblical account is concerned, yet this "whole earth" that the three sons of Noah populated (Gen 9:19) is delineated in Gen 10 as covering only the greater Near East.⁶³ The *entire* earth in the OT does not include the Far East, Australia, or the Americas. The entire earth in the OT does not even have space available for these land masses because surrounding the greater Near East, which is the *entire* earth in the OT, there was thought to be an uncrossable ocean with no land beyond it.⁶⁴ Nor is the earth in the OT a globe. There is no evidence that anyone prior to c. 500 B.C. believed the earth was a globe,⁶⁵ and the OT nowhere represents the earth as anything but flat.⁶⁶

The biblical account is also accommodated to the cosmology of the times. The earth-disc and surrounding ocean were thought to be surmounted by a rock-solid hemispherical dome, the sky, which came down all around the surrounding sea and sealed off the universe at the horizon.⁶⁷ As Stadelmann says in *The Hebrew Conception of the World*, the horizon is "holding the sky and the earth firmly together."⁶⁸ In the biblical cosmology as in the rest of the ancient

⁶² John Calvin, *Commentaries IX: Jeremiah 1-19* (repr., Grand Rapids: Baker, 1979), 7.

⁶³ See n. 16.

⁶⁴ Seely, "The Geographical Meaning," 240-50.

⁶⁵ Pythagoras (c. 500 B.C.) apparently hypothesized that the earth was spherical, but Plato (c. 400 B.C.) is the first person to clearly set forth the sphericity of the earth.

⁶⁶ See n. 11.

⁶⁷ Paul H. Seely, "The Firmament and the Water Above, Part I: The Meaning of *raqia'* in Gen 1:6-8," *WTJ* 53 (1991): 227-40. The belief that a rock-solid sky comes down all around the horizon and seals off the universe will seem odd to a modern Westerner, but all prescientific peoples believed the solid dome of the sky closed off their universe at the horizon. See Lucien Levy-Bruhl, *Primitive Mentality* (repr., Boston: Beacon, 1966), 353; Hartley B. Alexander, *The Mythology of All Races: Vol. 10, North American* (repr., New York: Cooper Square, 1964), 249.

⁶⁸ Luis I. J. Stadelmann, *The Hebrew Conception of the World* (Rome: Pontifical Biblical Institute, 1970), 43. See Prov 8:27, 28.

Near East, the firmament had to be sealed at the horizon because otherwise the ocean (תהום) on the outer side of the firmament would enter and overwhelm the earth with water. As Rabbi Eliezer said, "This firmament saves the earth from being engulfed by the waters of the heavens."⁶⁹

The "whole earth" of Gen 8:9 is thus not only a flat earth limited in extent to the world described in Gen 10; it is insulated by the ocean surrounding it and sealed off by the inverted bowl of the sky so that there is no place for another continent. The Americas and Australia are permanently excluded, and not even the Far East or even all of Africa or Europe can get into this OT universe.⁷⁰

Some might still imagine that the accommodated geography and cosmology in the biblical account can be replaced with our modern understanding of the sky and the extent and shape of the earth. But even if we could legitimately ignore the fact that a global Flood in the time of Noah has already been falsified by geology, glaciology, and archaeology, the biblical account still cannot be brought into agreement with modern science *because it is inextricably interwoven with the cosmology of the times—not only with reference to geography but right at its very heart: the source of the water for the Flood.* The cosmology of the times is sine qua non to the biblical description of the Flood as covering "all the high mountains that were under all the heavens." The covering of the genuinely high mountains of Ararat, the death of all the birds, and the virtual return of the earth to its pre-creation state (Gen 1:2) are all dependent upon and cannot be separated from the accommodated cosmology.

When Gen 7:11 says the Flood resulted from opening "all the fountains of the great Deep" and thus allowing the Deep ocean (the תהום) below the earth to gush up, and from opening the "floodgates of the heavens" and thus allowing the Deep ocean above the firmament to pour down, it makes the Flood contingent upon the existence of the Deep ocean above the firmament and below the earth.⁷¹ The תהום with its fathomless water is the indispensable source of the amount of water necessary to produce a Flood that could cover "all the high mountains under all the heavens" of the entire Near East.

If the accommodated Near Eastern cosmology is set aside or transmuted into modern terms, a Flood matching the biblical description is no longer possible. If, for example, the biblical account is modernized so that the phrase "floodgates of heaven" becomes merely a poetic way of speaking of rain, there would not be enough water available to flood even the then known earth much less cover "all the high mountains under all the heavens" of the entire globe. Rain comes from the water in the atmosphere, which only totals .001 percent of the total water on earth. Even if 100 percent of it were precipitated, it would only "flood" the earth to a depth

⁶⁹ *Pirqe R. El.* 4, cited in Louis Ginzberg, *The Legends of the Jews* (5th ed.; Philadelphia: Jewish Publication Society of America, 1968), 1:13.

⁷⁰ Archaeology also shows that the peoples of the Americas, Australia, and Japan were untouched by a Flood. The Koster site in the midwest U.S. shows 23 distinct continuous occupation levels dating from 7050 to 1050 B.C. The Australian aborigines date back well before 10,000 B.C. The Jomon culture in Japan has an uninterrupted cultural sequence that spans 7500 B.C. to A.D. 300.

⁷¹ See notes 17, 77, and 82-90.

of less than seven inches!⁷² Yet, rain is the emphasized source of water in the biblical account. God does not even mention the "fountains of the great Deep" to Noah. As Leupold rightly says, rain was "the main source."⁷³ How then from a modern scientific point of view could the Flood possibly have been global?

At one time creation science theorists, John Whitcomb and Henry Morris in particular, clearly saw that in Scripture the source of rain for the Flood was not simply water from the atmosphere, which they admitted could never be sufficient, but was according to Scripture the **הַמַּיִם הַהֵלֶלִים** waters above the firmament. They then removed these waters from their biblical context and from their ancient Near Eastern context and reinterpreted them in terms of modern science as a vapor canopy which existed in or above the atmosphere before the Flood.⁷⁴ Their direct answer to Ramm's statement that flooding the globe would require eight times as much water as in all the oceans on earth was that the vapor canopy, which they supposed was described in Gen 1:6-9, would provide "an adequate source for the waters of a universal Flood."⁷⁵

I have shown elsewhere that their modernizing reinterpretation of Gen 1:6-9 as referring to a vapor canopy below the sun is contrary to the historic interpretation of the Church and to the historico-grammatical meaning of the biblical text.⁷⁶ Nevertheless, it was at least true to Scripture in that it upheld the idea in Gen 7:11 (which is directly related to Gen 1:6-9) that the Flood was caused largely by a huge body of water above the earth descending as rain.⁷⁷ Unfortunately, in addition to the fact that their vapor canopy in or above the atmosphere is not really biblical, it has now been falsified scientifically as well.

Interestingly, it was creation scientists who falsified it.⁷⁸ They examined the hypothesized vapor canopy and found that, if the canopy were to have more than a mere twenty inches or so of precipitable water, the extreme heat that would be produced by the canopy's greenhouse effect would kill all the animals and people on earth before the ark was even built.⁷⁹ Even if adjusted to optimistic parameters, they concluded that the canopy could not hold more than

⁷² Bernard Ramm, *The Christian View of Science and Scripture* (1955; repr., London: Paternoster, 1960), 165-66; John C. Whitcomb, Jr., and Henry Morris, *The Genesis Flood* (Philadelphia: Presbyterian & Reformed, 1961), 121.

⁷³ Herbert C. Leupold, *Exposition of Genesis* (Grand Rapids: Baker, 1942), 1:295.

⁷⁴ Whitcomb and Morris, *The Genesis Flood*, 77, 121; Henry M. Morris, *The Genesis Record* (San Diego: Creation-Life, 1976), 191.

⁷⁵ Whitcomb and Morris, *The Genesis Flood*, 77.

⁷⁶ Seely, "The Firmament and the Water Above, Part II," 40-45.

⁷⁷ The close tie that the Flood has with the water above the firmament as a major source is underlined by the fact that the Hebrew word consistently used for "flood" (**מַבּוּל**) throughout Gen 6-9 has the primary meaning "the celestial sea" (*HALOT* 2:541).

⁷⁸ Glenn Morton, "Can the Canopy Hold Water?" *Creation Research Society Quarterly* 16 (1979): 164-69. Morton was a believer in creation science at the time. See also n. 79.

⁷⁹ David E. Rush and Larry Vardiman, "Pre-Flood Vapor Canopy Radiative Temperature Profiles," in *Proceedings of the Second International Conference on Creationism* (ed. Robert E. Walsh and Chris L. Brooks; Pittsburgh: Creation Science Fellowship, 1990), 2:238-45; Glenn R. Morton, *Foundation, Fall and Flood* (Dallas, Tex.: DMD, 1994), 54-56. For more problems with the canopy theory see David F. Siemens, Jr., "More Problems with Flood Geology," *Perspectives on Science and Christian Faith* 44 (1992): 229-35, and Robert L. Whitelaw, "The Fountains of the Great Deep and the Windows of Heaven" in *Science at the Crossroads* (Minneapolis: Bible-Science Association, 1983), 95-98.

about six and a half feet of precipitable water.⁸⁰ Vardiman has recently tried to make the canopy hold even more water by reducing the solar constant to around 25 percent of its current value.⁸¹ But his work is based on improbable conjectures, and he does not seem to have any more in mind than a canopy that might hold around eighteen feet of precipitable water. Glenn Morton tells me that even if the solar constant were turned down to around 1 percent (so that daylight would be like twilight), the canopy could still only hold around forty feet of precipitable water. So even under the most imaginative scenario, the amount of water in the canopy would still be far too small to be of any real significance for a global Flood.

The hypothesized vapor canopy as the primary source of water for the Flood has thus been falsified both biblically and scientifically. Accordingly, in spite of the fact that rain was *the* or at least *a major* source of water for the Flood according to Scripture, the water from the "floodgates of heaven" has generally become a distinctly minor source of the water for the Flood in creation science circles. It has very largely been subordinated to the "fountains of the great Deep" that creation science associates with the earth's oceans. And since the creation science theorists have not understood that the reason the vapor canopy failed so badly is because a divine accommodation to ancient cosmology was misinterpreted as a VCR scientific account of history, they make the same hermeneutical error again with regard to the "fountains of the great Deep."

VII. *The Fountains of the Great Deep*

After the primeval Deep (תְּהוֹם) was split in two at creation (Gen 1:6-9), the bottom half was placed around the earth as seas (Gen 1:9, 10). Since the earth was understood to be a flat disc, the Deep naturally flowed under the earth as well. The earth-disc was thus understood to float upon the seas (Pss 24:2; 136:6). The Deep sea below the earth was understood to be a source of water for vegetation and was paired with water from above as a source of agricultural blessing (Gen 49:25; Deut 33:13).⁸²

The Deep sea below the earth is seen again as a source of water for vegetation in Ezek 31:3-7, 15. In this passage Ezekiel likens the Assyrians to a cedar tree of Lebanon (31:3) which had its roots in "great waters" (31:7), and those waters are identified in 31:4, 15 as the תְּהוֹם, the "Deep." The tree thus puts its roots into the Deep sea beneath the earth in order to draw up the water it needs for growth.⁸³ The "great waters" of the "Deep," or the "great Deep" as it is

⁸⁰ Larry Vardiman and K. Bouscelot, "Sensitivity Studies on Vapor Canopy Temperature Profiles," in *Proceedings of the Fourth International Conference on Creationism* (ed. Robert E. Walsh; Pittsburgh: Creation Science Fellowship, 1998), 607-18.

⁸¹ Larry Vardiman, "Temperature Profiles for an Optimized Water Vapor Canopy" in *Proceedings of the Fifth International Conference on Creationism* (ed. Robert L. Ivey; Pittsburgh: Creation Science Fellowship, 2003), 29-39. Online: <http://www.icr.org/research/icc03/pdf/Canopy.pdf>.

⁸² For details and ancient Near Eastern parallels, see my "The Geographical Meaning," 246-55.

⁸³ There is a parallel passage in Stephanie Dalley, *Myths from Mesopotamia* (Oxford: Oxford University Press, 1989), 291: "The pure timber . . . Whose roots reach down into the vast ocean."

called in Gen 7:11, are thus clearly set forth in Ezek 31 as well as in Gen 49:25 and Deut 33:12 as a sea below the earth good for growing vegetation.

From these passages in Ezekiel, Gen 49:25, and Deut 33:13 along with ancient Near Eastern parallels, OT biblical scholars, including the consensus of evangelical OT scholars, agree that the "fountains of the great Deep" which supplied the water for the Flood were *fresh water terrestrial* fountains drawing upon a *subterranean* sea.⁸⁴

Gordon Wenham, commenting on Gen 7:11, says, "All the springs . . . [suggest] water gushing forth uncontrollably from wells and springs which draw from a great subterranean ocean ('the great deep')." ⁸⁵ Bruce Waltke observes, "The earth is being returned to its precreation chaos by the release of the previously bounded waters above and by the upsurge of the subterranean waters (See 1:2, 6-9, 8:2)." ⁸⁶ Kenneth Mathews writes, "Subterranean waters 'burst forth.'" ⁸⁷ H. C. Leupold also recognizes the "great deep" as subterranean water and links it to the agricultural blessings in Gen 49:25 and Deut 33:13. ⁸⁸ Most tellingly, even the Seventh Day Adventist OT scholar Gerhard Hasel, who believed the Flood covered our modern globe, conducted a thorough study of the phrase "fountains of the deep" and concluded:

In Gen 7:11 the meaning of "burst forth" refers to a breaking open of the crust of the earth to let subterranean waters pour out in unusual quantity. Accordingly "all the fountains of the great deep burst forth" may be taken to refer to the fountains, which in normal times furnished sufficient water for the needs of men and animals and the irrigation of the fields. ⁸⁹

Within their biblical and historical context, the "fountains of the great Deep" are the fresh water springs (1 Kgs 18:5), wells (2 Kgs 3:19), and sources of rivers (Joel 3:18b [4:18b]) fed by the subterranean sea upon which the earth is resting. ⁹⁰ They may be stopped up because it is the dry season or because of dust blown into them or because of enemies having filled them with dirt (Isa 41:17, 18; Hos 13:15; Gen 26:15; 2 Kgs 3:19). But if all of them were opened at once, the earth would look like a raft which had sprung hundreds of leaks. The great Deep below the earth would rise up everywhere and pour out upon the face of the earth. That is the picture painted in Gen 7:11.

⁸⁴ Moshe Weinfeld, "Gen 7:11, 8:1, 2 Against the Background of Ancient Near Eastern Tradition," *WO* 9 (1978): 242-48; see also n. 90.

⁸⁵ Wenham, *Genesis 1-15*, 181.

⁸⁶ Waltke, *Genesis*, 139.

⁸⁷ Mathews, *Genesis*, 376. Victor Hamilton did not comment on the "fountains of the Deep," but did say that the flood waters "returned to their original position, either above or below the earth" (*The Book of Genesis*, 300).

⁸⁸ Leupold, *Exposition of Genesis*, 1:295-96.

⁸⁹ Gerhard F. Hasel, "The Fountains of the Great Deep," *Origins* 1 (1974): 67-72.

⁹⁰ Seely, "The Geographical Meaning," 252-54; David T. Tsumura, *The Earth and the Waters in Genesis 1 and 2* (Sheffield: Sheffield Academic Press, 1989), 40-41, 151-52, 164; Wilfrid G. Lambert and Alan R. Millard, *Atra-Hasis: The Babylonian Story of the Flood* (Oxford: Oxford University Press, 1969), 8, 11, 73, 109; Umberto Cassuto, *A Commentary on the Book of Genesis* (Jerusalem: Magnes, 1961), 2:84; Thorkild Jacobsen, *The Harps that Once . . .* (New Haven: Yale University Press, 1987), 381.

Since in Scripture the source of the water coming up through the "fountains of the great Deep" is an unfathomably deep subterranean ocean, these fountains could easily supply all of the water necessary to "cover all the high mountains under all the heavens" in the entire Near East. But just as we know today there is not enough water available in the atmosphere to make rain a serious source for flooding the entire earth, we also know there is not enough water available from fresh water springs to seriously flood the entire earth.

Ground water and soil moisture, which would be the modernized counterpart to the subterranean ocean that supplied the water for the tree in Ezek 31, the agricultural crops in Gen 49 and Deut 33, and the terrestrial fountains of Gen 7:11, constitute just 0.615 percent of all water on earth. If 100 percent of it flowed out upon the earth, it would flood the earth to a depth of less than 60 feet. It is obvious then that if they are transmuted into modern terms, the "fountains of the great Deep" are completely inadequate to cover all the high mountains of even the Near East.

Indeed, even if all of the ocean beds were raised to present day sea level so that all of the ocean water flooded the land, there would still not be enough water to cover "all the high mountains under all the heavens." Such a scenario is, of course, *not* in harmony with the biblical description of the sources of the Flood's water because the biblical sources give forth *fresh* water not saline; but it is telling that even if such a scenario were in line with Scripture, it would only cover the earth to a depth of 1.7 miles, leaving many mountains uncovered, including some of those in Ararat.

So not only is there not enough water in the atmosphere and the ground to flood the earth to the depths described in the Flood account, there is not enough water on all the earth to flood the earth to such depths. This problem is so pressing that creation science advocates have had to lower the pre-Flood mountains to less than 1.7 miles in height, cover them with ocean water, and then raise them to their present heights during or after the Flood. The scientific radicality and ad hoc nature of this measure underline the fact that the ancient cosmological sources are the *only* ones capable of supplying enough water to "cover all the high mountains under all the heavens."

Further, lowering the pre-Flood mountains and raising them later is falsified by science. Any geologist or physicist (including the minority who subscribe to creation science) will tell you that the notion of the mountains growing to their present heights during a period as short as the Flood seriously violates the laws of physics.⁹¹ In addition, if mountains had been raised independently of the continents even in the years since the Flood, telltale fault trenches and gouge (ground up rock) zones would be left; but no such trenches or gouge zones exist.⁹² If the entire continents sank and then rose, or if the ocean basins rose and then fell, there would be fractures all along the borders of the continents; but there are

⁹¹ Wayne Ault, "Flood," *ZPEB* 2:560. See Davis Young, *Creation and the Flood* (Grand Rapids: Baker, 1977), 177-85.

⁹² Ault, "Flood," 2:556.

none.⁹³ If tectonic forces pushed the mountains up as envisioned by one of the more sophisticated Flood theories, the heat generated would have been so intense it would have made a holocaust of the ark and everything in it.⁹⁴

One could, of course, just add this mountain-raising to Scripture as a miracle, but adding such a gigantic miracle to Scripture would only make clearer the ad hoc nature of this "solution." Further, since the above mentioned geological evidence of the mountains rising is missing, one would have to add a second miracle to erase the evidence that the first miracle had taken place!

Aware that they have no scientific basis for saying the mountains rose during or after the Flood, yet pressed by the fact that, even if all of the water on earth were employed, the Flood would still not cover "all the high mountains under all the heavens," Whitcomb, Morris, and others have appealed to Ps 104:6-9 as a revelation of the fact that the mountains rose during the Flood. But the Church ancient and modern has universally understood Ps 104:6-9 as referring to creation, not the Flood, and it is questionable whether the Psalm even says the mountains rose.⁹⁵ In addition, Scripture refers to the mountains as "ancient" or "eternal" (Deut 33:27; Hab 3:6) and regularly associates them as they were known in the post-Flood world with creation (Pss 90:2; 104:6; Prov 8:23-25). Lowering them before the Flood can scarcely be considered a straightforward reading of the biblical text. The lowering of the mountains before the Flood and raising them afterward is clearly ad hoc and violates both science and Scripture.

This means the Flood account cannot be imported into the modern world as a VCR account. This does not mean that the story of the flood is a myth. There is good archaeological evidence that there really was a serious riverine flood in southern Mesopotamia c. 2900 B.C., which is probably the basis for the account in Genesis.⁹⁶ But archaeology, glaciology, and geology falsify the catastrophic dimensions of the Flood as given in Gen 6-9.

Whatever the reason may be why the Flood in Gen 6-9 was written up as a cosmic event, it is not a VCR account. Neither its size nor its sources can be imported into the modern world. There simply is not enough water (much less fresh water as the biblical text demands) in the atmosphere, the ground, or even the entire earth to produce such a flood. Only in the divinely accommodated ancient cosmology with its fathomless Deep located above the sky and below the earth is there enough water to produce the cosmic dimensions of the Genesis Flood.

⁹³ Morton, *Foundation, Fall and Flood*, 57.

⁹⁴ Steven A. Austin et al., "Catastrophic Plate Tectonics: A Global Flood Model of Earth History," in *Proceedings of the Third International Conference on Creationism* (ed. Robert E. Walsh: Pittsburgh: Creation Science Fellowship, 1994), 609-21. They say the amount of heat that would be released is "on the order of 10^{28} J[oules]." This is enough heat to boil the ocean more than 8 billion times over. Or, to put it another way, if the ocean did not boil off, it would reach a temperature of 8,300,000,000,000 degrees C!

⁹⁵ Paul H. Seely, "Creation Science Takes Psalm 104:6-9 out of Context," *Perspectives on Science and Christian Faith* 51 (1999): 170-74.

⁹⁶ See n. 27.

VIII. Conclusion

Concordism with its detour around all of the biblical data, which describe the Flood as being much more extensive both in breadth and depth than any concordist theory allows, and creation science with its insistence upon forcing modernizing reinterpretations upon "the waters above the firmament," "the fountains of the great Deep," and "the earth," show that both camps are suppressing Scripture in order to achieve some harmony between the biblical account and scientific truth. Nor are scientific facts always given their due even by concordism, much less by creation science. As a result, neither concordism nor creation science truly harmonizes science and Scripture.

This failure to harmonize science and Scripture truly is nothing new for concordism or literalism. In an attempt to harmonize the biblical account of the Flood with the scientific facts, both concordism and literalism have offered theory after theory, year after year, for the last 300 years. Yet not a single one of these theories has stood the test of time. Concordism and literalism's three hundred years of failure testify strongly that Davis Young was correct when he looked at this dismal history and said that "both literalism and concordism have outlived their usefulness, and that these approaches should be abandoned for a newer approach."⁹⁷

Instead of continuing to follow a path that inevitably has resulted in ignoring, distorting, or suppressing Scripture in order to make it agree with the scientific facts, I suggest that the kingdom of God would be better served by adhering to a more biblical view of Scripture that recognizes with Warfield that an inspired writer can

share the ordinary opinions of his day in certain matters lying outside the scope of his teachings, as, for example, with reference to the form of the earth, or its relation to the sun; and, it is not inconceivable that the form of his language when incidentally adverting to such matters, might occasionally play into the hands of such a presumption.⁹⁸

In Gen 1 the solidity of the sky was the ordinary opinion of the day but certainly lies outside the scope of the writer's teachings. The intent of Gen 1 is to reveal the Creator of the sky not the scientific nature of the sky. There is no need to suppress the fact that the sky is described as solid in Gen 1 with half of a sea above it. God can scarcely be accused of lying or ignorance when he has no intention of revealing scientific truth but is merely accommodating his revelation to the science of the times. When Charles Hodge was asked why a solid firmament was mentioned in Gen 1, he appealed to Calvin's concept of accommodation to explain it.⁹⁹ Yet, without the real existence of a solid firmament, the literal history conveyed in Gen 1:6-9 is falsified: God did not really

⁹⁷ Davis A. Young, "Scripture in the Hands of Geologists, Part One," *WTJ* 49 (1987): 6.

⁹⁸ Benjamin B. Warfield, "The Real Problem of Inspiration," in *The Inspiration and Authority of the Bible*, 166-67.

⁹⁹ Charles Hodge, *Systematic Theology* (3 vols.; Grand Rapids: Eerdmans, 1952), 1:569-70.

make a solid sky nor put half a sea above it (v. 7). Nor can the account be transmuted into modern terms because the sky as we understand it today was not made subsequent to the earth being covered with water, and it does not have a sea above it (Ps 148:4). Genesis 1:6-9 is not a VCR account.

Nevertheless, Warfield's view of inspiration allowed the solid firmament to be included in the biblical text, and Hodge accepted it as an accommodation. The accommodation we find in the Flood account to a solid firmament as well as to the sea above it and the sea below the earth coalesces with Warfield's and Hodge's view of inspiration and is also in principle in accord with Calvin's doctrine of accommodation.¹⁰⁰ It is thus perfectly in accord with an orthodox view of inspiration to recognize that the Flood account encompasses an accommodation to ancient cosmology. Yet that cosmology lacks any real existence, and therefore the literal history of a cosmic Flood that is dependent upon it is falsified. Genesis 6-9, like Gen 1:6-9, is not a VCR account.

The Flood account is not trying to educate the Israelites scientifically but is accommodated to their prior scientific understanding. This does not mean that the story of the Flood is a myth. A comparison to the Mesopotamian accounts of the same flood shows that Gen 6-9 is a- if not anti-mythological. Nor does it mean that the story is just fiction. There is good reason to believe that both the Mesopotamian and biblical accounts are based upon an actual flood that occurred c. 2900 B.C., and both accounts agree upon other various particulars.

Nevertheless, the biblical account particularly with reference to its cosmic dimensions cannot and should not be taken as VCR history. The biblical account is divinely accommodated to and integrally intertwined with the science of the times, and that accommodation to outdated science prevents it from ever being completely harmonized with modern science. Its purpose is not to teach history but theology. It employs the "notions which then prevailed" in order to communicate theological lessons to the ancient Israelites, teaching them such important truths as humankind's sad depravity, the importance of obedience to God's word, God's patience in waiting for man's repentance, his ability to bring apocalyptic judgment upon unrepentant sinners, and his amazing saving grace.

¹⁰⁰ See my discussion of Calvin's doctrine of divine accommodation in my paper, "The Date of the Tower of Babel and Some Theological Implications," *WTJ* 63 (2001): 15-19. It should also be noted that Calvin saw Jesus as the ultimate source of the idea that inspired Scripture can be accommodated to the notions of the times (Matt 19:8; Mark 10:5).

Copyright of Westminster Theological Journal is the property of Westminster Theological Seminary. The copyright in an individual article may be maintained by the author in certain cases. Content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.