

Making Sense of the Days of Peleg

By Richard D. Lanser

“And two sons were born to Eber; the name of the one was Peleg, for in his days the earth was divided” (Gn 10:25, NASB)

Some very popular books today, such as Graham Hancock’s *Fingerprints of the Gods*, examine the evidence for a “mysterious” civilization in the ancient past. Among other indicators, this widespread culture left behind megalithic (“large stone”) buildings in such diverse places as Tiahuanaco in Bolivia, the Osireion in Egypt, and Baalbek in Lebanon. These structures, built of gigantic hewn stones that leave one wondering how they could have been quarried, moved and fitted together with a precision that challenges our understanding of the capabilities of ancient man, are either largely ignored by mainstream science or not considered within a Biblical framework.

These megalithic ruins demand to be placed within an historical context, so Hancock’s attempt is worthwhile. But he is handicapped in seeking an explanation because he has apparently

ruled out examining them within a Biblical framework. Yet even those who know their Bibles well find these structures a challenge to understand. They cannot be fit into an antediluvian timeframe (that is, before the Flood), since beneath them lay fossil-bearing sedimentary rocks that had previously been deposited by the waters of Noah’s universal Flood. Finding a satisfying post-Flood solution has been difficult as well. These structures, though widely scattered around the world, share features that indicate a common cultural origin; for example, stones weighing many tons were used, having very tight joints and often cut in asymmetrical shapes, and requiring unknown technology to move and place them. Such a common cultural origin seems unlikely if one holds the view that mankind dispersed from Babel (Gn 11:1–9) into a world where the Americas were already widely separated from Eurasia. It is no wonder Hancock considers these megalithic ruins a great mystery. A similar mystery is the presence of pyramids in Mesoamerica, not unlike those in Egypt.

In Search of a Biblical Framework

Having a deep interest in the earliest chapters of Genesis, I decided to search for a way to place these structures, as well as a number of other “mysteries” I had read about, into a Scriptural framework. My attention quickly focused on a detailed examination of Genesis 10:25, which states that in the days of Peleg, the earth was “divided.” Could this verse, I wondered, refer to a literal division of the land, rather than being the same as the Babel division of languages, as I had been taught? If so, I figured the passage could be a key to unlock part of the mystery that befuddled Hancock. I reasoned that if there had been a single continent for some time after the Flood, allowing easy



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The “Trilithon” in the Temple of Jupiter at Baalbek, Lebanon. These three stones are the largest building blocks in the world, each measuring 70 ft (21.5 m) long, 14 ft (4.3 m) high and 10 ft (3.1 m) thick, and weighing around 800 tons (726,000 kg). The shared knowledge, by people now widely separated, of how to move and precisely place such huge stones, is easier to understand if their geographical separation did not take place until after the Babel event.



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Megalithic ruins of the fortress at Sacsayhuaman, Peru. One stone in this structure measures 28 ft (8.6 m) in height and is estimated to weigh 361 tons (327,000 kg).

movement and trade over vast distances prior to both the Babel disruption and the Ice Age—a Golden Age, as it were, free of the hazards of ocean travel or the obstruction of precipitous mountain ranges—then it would make much easier the spread of common culture that still recalled some of the pre-Flood methods of building passed down by Noah and his sons. Such knowledge seems required to explain the mystery of the megaliths.

Though I cannot say I have arrived at final conclusions, I have a certain level of comfort with the model I have put together, and lay out for your consideration below. Though incomplete, I believe it provides a basic framework for reconciling with Scripture a number of “mysterious” facts difficult to fit with current understandings.

Examining the Scriptures

The first thing was to determine whether there were objective reasons to think the division of Peleg was a division of the earth itself. For that to be the case, there had to be evidence that there was a single continent in his day, not broken up earlier by the Flood. I decided to start the study from a Biblical rather than a scientific perspective. Inerrant, God-breathed Scripture itself (2 Tm 3:16) must lay the foundation for a proper understanding of the early earth, with fallible science—dependent as it is on the imperfect reasoning and observational powers of men—playing merely a supporting role. Too many people today get this backwards. When Christians seek first the opinions of secular

scientists to understand how the present world came about, they typically compromise with the assumed long ages of mainstream geology. This results in rationalizing away the “evening and morning” days of Genesis 1 as long periods of time, or in some other way trying to force Scripture into a framework defined by science. They also dismiss the clear language of a universal Flood—Genesis 7:19 NASB, “ALL the high mountains EVERYWHERE under the heavens were covered”—in favor of a localized Mesopotamian flood, from which Noah would neither need an Ark to escape nor require the animals to come to him to avoid extinction. With 100 years of advance warning, men and animals could simply have moved to the next town! Only unbelief in the Bible can explain holding to this position.

In contrast with such mental gymnastics, when one begins with the assumption that the Bible is indeed the Word of God, and says what it means and means what it says, one can read Genesis and draw valid conclusions by using simple logic and a straightforward method of interpretation. That is what I set out to do.

The very first thing to consider, therefore, was the Biblical data. I began by reading Genesis 1:9: “Then God said, ‘Let the waters below the heavens be gathered into *one place*, and let the dry land appear’; and it was so” (all Scripture quotations from the NASB; my emphasis). Where were the waters being gathered? Into *one place*, not multiple places. The logical corollary must be that the dry land likewise was gathered into one place, not divided into multiple continents as in the present day. God separated the

light from the darkness; He similarly separated the land from the world sea. The resulting original continent corresponds with what secular science calls Pangaea (Greek for “all lands”), the term I will use as we turn to consider how well various scientific models match up with the Scriptural data.

Etymology

Satisfied that Scripture upheld the existence of a single post-Flood continent, I then moved on to consider the Genesis 10:25 passage about Peleg. The more I studied it, the more convinced I became that it did *not* refer to the Babel event.

For one thing, I discovered there are clear etymological considerations based on Peleg’s name that strongly indicate this division involved water. Bernard Northrup, a Hebrew scholar, states:

[Peleg, palag, or PLG] often contains within it a reference to water. It is used to refer to a stream of water in Hebrew, Coptic, Ethiopic and in Greek. The root is used to refer to irrigation canals which carried the water throughout the

farming land of Mesopotamia. However, an examination of the Greek usage (of the family of Japeth [one of Noah’s three sons]) of the root letters PL and PLG clearly shows that in the majority of the instances this root was used of the ocean...It is used to mean: “to form a sea or lake,” “of places that are flooded and under water,” “of crossing the sea,” of “the broad sea” itself, of “being out at sea,” “on the open sea.” It is used of seamen and ships. The noun with the result suffix is used of “an inundation.” I continue: it is used of “a being at sea,” of “a creature of or on the sea,” of “one who walks on the sea,” of “running or sailing on the open sea,” of “a harbor that is formed in the open sea by means of sandbags,” and in many ways of “the open sea itself,” of “going to, into or toward the sea,” of “roving through the sea,” of “being sea-nourished,” of “turning something into the sea or into the sea or of flooding.” It is quite apparent that every Greek usage here involves the sea in some way (1979: 165–66).

It was further pointed out to me by a seminary friend that the Hebrew grammar, which uses the perfect form of *palag* in Genesis 10:25, refers to the *event of dividing* rather than the



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The Sun Gate at Tiahuanaco, Bolivia. It is carved out of a single piece of solid andesite and weighs more than 10 tons.

state of being divided. This is significant, because the Scriptures indicate that Peleg was given his name by his parents due to an event that began some time before his birth, but was still ongoing when he was born. It encompassed something happening during his “days” (note the plural), and was not a one-time event that had been completed and transitioned to a finished state. The grammar is thus consistent with the division being a continuing process of increasingly greater separation of land areas by the sea. It began as a sort of natural “canalization,” but over time far exceeded that limited scale.¹ The Babel disruption of languages, however, was a one-time event that immediately created a *state* of division. It was an instantaneous supernatural event, not a process. These grammar considerations strongly indicated that the division in Peleg’s day was not the same as the disruption of languages at Babel.

Chronology

We also find support for a division of the land in Genesis 10:25 when we look at chronological factors. The genealogy of Shem in Luke 3:35–36 includes the mention of Cainan; though differing from the Masoretic (Hebrew) text, this matches the Alexandrian Septuagint (Greek) version quoted by Luke, allowing us to place Peleg in Shem’s *fifth* generation after the Flood (Shem > The Flood > Arphaxad > Cainan > Shelah > Eber > Peleg).

However, the Babel event affected the *second* generation of the descendants of Japheth. Genesis 10:5 notes that, beginning with the sons of Javan, son of Japheth, “the coastlands of the nations were separated into their lands, every one *according to his language*” (my emphasis). “According to his language” is a major clue to the timing of Babel. Since there was a universal language until then, we can connect the confusion of languages with Japheth’s grandchildren. But we must jump forward to the fifth generation of Semites before we come to Peleg’s division. It is reasonable to expect that the generations of the descendants of Shem and Japheth, being brothers, would closely coincide; therefore, there must exist an interval of at least two full generations between the Babel and Peleg events. Accounting for long human life spans at the time, this means approximately 200–300 years separate Babel and Peleg. Thus, chronology considerations force us to conclude they are NOT the same event; the first affected languages, the second the earth itself.

Northrup analyzed the pertinent texts and reached the same conclusion:

The division of the continents is an event that, according to evidence in the Septuagint and Luke 3:35–38, must be dated five generations after the Noachic flood. This was about two full generations after the division of the languages at Babel (Gen. 10:25) even though that event is not described until Genesis 11:1–9. As I have said, this follows normal Hebrew arrangement where a bird’s eye view of an event often is first given and then the detailed description is given later (2002).

To summarize, we see that when chronological matters are considered, they indicate that the Babel and Peleg events cannot be one and the same.

Hydrology

A third Scripture-based consideration has to do with the beginning of the Flood itself. The key passage is Genesis 7:11:

In the six hundredth year of Noah’s life, in the second month, on the seventeenth day of the month, on the same day all the fountains of the great deep burst open, and the floodgates of the sky were opened.



David Nelson

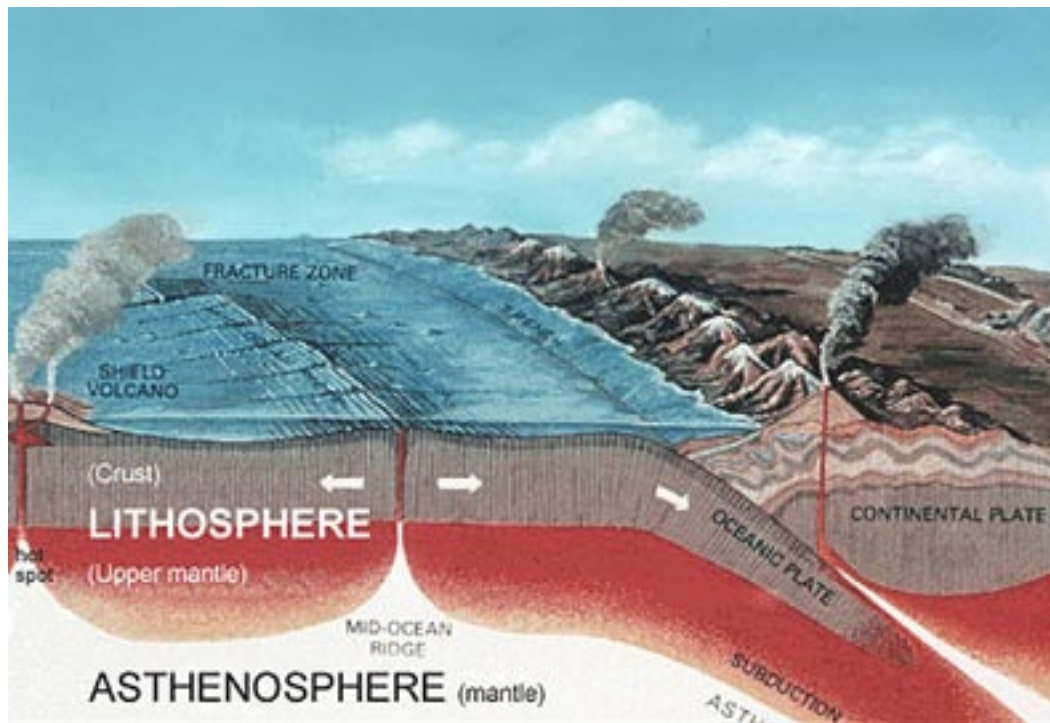
Artist’s representation of Pangaea, the original single landmass after God separated the land and the waters in Genesis 1:9.

We must not lose sight of the fact that Scripture presents the Flood event as one in which the action of water, from below and above, is primary. There is no hint whatsoever within the text that mantle dynamics, critical to some models of the Flood, come into play. It may be objected that this argument from silence is acceptable because we cannot expect the Bible to touch on such an arcane scientific subject, but the fact remains and must be acknowledged: all efforts to read mantle dynamics and plate tectonic action into this passage are just that, *reading into the text*. Such efforts, though well intentioned, come from *a priori* assumptions influenced by science.

Let us make a diligent effort to avoid such assumptions, and simply scrutinize the phrase, “fountains of the great deep” (Heb. *ma’yenoth #hôm rabbah*). All this verse requires is a reservoir of water under pressure, for whatever reason, and released in such a way as to flood the earth from below. (The torrential rainfall *may* have been a direct consequence of the fountain breakup, but could equally likely have been an independent atmospheric effect caused by the same trigger that opened the fountains of the great deep; Scripture does not permit us to distinguish between these two options.) That such pressurized water existed in the pre-Flood world is supported by Genesis 2:5–6: “for the LORD God had not sent rain on the earth...but a mist used to rise from the earth and water the whole surface of the ground.” Although the pressurized nature of this mist is not immediately apparent from the NASB, the text notes indicate the word “flow” could have been used in place of “mist,” and the NIV goes so far as to translate the word as “streams.” Even accepting “mist” as correct, the NASB indicates it was not merely common dew; it “used to” rise from the earth, meaning it no longer occurred and was an exception to the post-Flood norm. Also, the NASB text states “a river flowed out of Eden” (Gn 2:10), which sounds like its source was a subterranean spring, a voluminous artesian well that provided the source for four rivers. So it does look like a pressurized subterranean water source is in view.

Gerhard Hasel of Andrews University closely examined the Genesis 7:11 passage, looking at the original Hebrew terms and comparing the sentence structure with other Semitic writings. He concluded:

it appears safe to suggest that in Genesis 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 the whole clause “all the fountains of the great deep burst forth” may be taken to refer to the fountains,



Windows to the Universe, <http://www.windows.ucar.edu>

The main features of the earth’s structure.

which in normal times furnished sufficient water for the needs of men and animals and the irrigation of the fields. At the beginning of the flood these fountains burst open and poured out such terrific quantities of water which together with the water raining down from the heavens brought about the flood which destroyed all life on earth... it appears that the bursting forth of the waters from the fountains of the “great deep” refers to the splitting open of springs of subterranean waters with such might and force that together with the torrential down-pouring of waters stored in the atmospheric heavens a worldwide flood comes about (1974: 67–72).

The “fountains of the great deep” thus appears to be a pressurized, pre-Flood subterranean water source.

Summarizing the Text Issues

In closing out the textual side of our study, it is worth noting three other things in passing.

- Since in Genesis 11:1–9 the Babel event is clearly defined as one of the confusion of languages, if this was also in view in 10:25, there would have been no reason to obscure the issue there by writing “the earth” (*ha erez*) instead.
- Further, 10:25 defines the Babel event as a “scattering” (Heb. *puwtz*) rather than a *palag* “division.” There must be a reason for this difference in the original Hebrew, and we must not minimize it to maintain a theory.
- Some propose (e.g., Wesley 2009) the division of Peleg’s day was simply the laying out by Noah and his descendants of the political boundaries of nations. This is extremely unlikely, requiring us to suppose that a mere political decision was of sufficient importance to name one’s son after, and also suffers from being inconsistent with the perfect tense of *palag*.

Current Models of the Early Earth

Such are the Scriptural indications supporting the Peleg event being the division of the earth's single landmass. Now we will move on to consider the scientific side of things. Let us first review the currently accepted understanding of the earth's structure and the terminology used to discuss it.

- The *crust* is the upper layer of the Earth. Its thickness depends on the location. Beneath the oceans it is only about 3 mi (5 km) thick, while on the continents it may be up to 40 mi (65 km) thick.

- The *lithosphere* is comprised of the crust and upper mantle, and extends about 50 mi (80 km) deep. It is broken into giant tectonic plates that fit around the globe like puzzle pieces.

- The *asthenosphere* is the somewhat fluid part of the mantle, generally 60–120 mi (100–200 km) below the earth's surface but perhaps extending as deep as 250 mi (400 km), on top of which the tectonic plates slide. High temperatures (around 2900° F [1600° C]) keep this low-density area in a ductile, plastic state that the lithosphere can move on. Its existence is known because seismic waves, which decrease in speed with the softness of a medium, pass relatively slowly through it (Windows to the Universe 2008).

Plate Tectonics

With our terms defined, let us look first at the theory embraced by mainstream science, plate tectonics. Originally proposed by a German named Alfred Wegener in 1912, this model proposes that the earth's outermost layer, the crust and its underlying bedrock, is fragmented into a dozen or more "plates" of varying sizes and shapes riding upon the asthenosphere. This theory supports the Scripture-derived idea of a single original landmass via several lines of evidence. These include:

- The shapes of many continents look like they are separated pieces of a jig-saw puzzle.
- Many fossil correspondences exist along the edges of continents that look like they fit together, which only makes sense if the two continents were joined at some point in the past.
- A large amount of seismic, volcanic and geothermal activity occurs along the conjectured plate boundaries.
- There are rift zones, such as the Mid-Atlantic Rift, where



Roy Tennant, FreeLargePhotos.com

Level, undisturbed strata, free of faults and warping, are observed in the Grand Canyon. This is the way we would expect all of the original sedimentary rock layers to have looked before the onset of tectonic activities and mountain-building in the time of Peleg.

magma welling up from below acts to push apart the plates, which in turn causes mountain ranges to form where plates get pushed against each other (e.g., the Andes and Himalayas, which are still measurably rising).

- Glacial striations on rocks indicate that glaciers moved from Africa toward the Atlantic Ocean and from the Atlantic onto South America, a situation most likely if there had been no Atlantic Ocean and the continents had still been joined during at least part of the Ice Age (Physical Geology 2009).

This theory dovetails nicely with our Scriptural evidence, so far as supporting a single original landmass. It also appears to provide a good general model to explain the arrangements of the continents today, although, to my knowledge, how the individual plates originally arose is not specified. Unfortunately, being tied to the modern long-ages view of secular science, the theory proposes that the plates crawl randomly, over millions of years, over the asthenosphere as set in motion by convection currents arising from the deeper mantle. It thus does not provide a satisfying answer to the presence of mountain chains along the west coasts of North and South America, chains whose sharp, rugged peaks bear all the hallmarks of youth. These are most likely the result of a violent, forcefully driven collision of the plate carrying the Americas with the Pacific Plate, not the result of mere passive drifting over the asthenosphere, when one would expect them to merely bump and drift around each other. Rather, these rugged mountains look like the crumple zone of a car involved in a head-on impact. There was a forceful, directional collision involved in causing this effect. Yet, the long ages are not a requirement of the basic theory itself, so if it can be divorced from its evolutionary baggage, its concepts could be

useful. We shall see.

We turn now to examine several scientific theories put forth to explain the current configuration of the earth's continents, and see how well they match up with the textual data. But a word in advance. Geology and geophysics, the sciences most often called upon to supply answers to questions about early earth history, are more theoretical than we could wish. Dealing with past events and unknown starting conditions, they attempt to come to logical conclusions from an unavoidably incomplete set of facts, with no solid evidence that the conclusions are correct. We cannot directly observe things happening deep in the earth's crust, but must use indirect methods, like interpreting seismic waves and constructing computer models, to try to understand them. This is as true of creationary attempts to model early geology with the Flood in mind as it is of secular attempts within a uniformitarian framework.

This difficulty notwithstanding, a number of models have been developed to try to reconcile the observations of science with the book of Genesis. The two best known are the Hydroplate Theory of Walt Brown and the Catastrophic Plate Tectonics (CPT) theory of John Baumgardner. The formerly popular Vapor Canopy idea looks mainly for an explanation for the Flood rainfall, and will not be considered here.

It is beyond the scope of this article to give detailed descriptions of these models.² Our main objective will be to evaluate them to see how well they compare with the Scriptural data described above, and then seek a solution to their weaknesses.

The Hydroplate Theory

Brown's Hydroplate Theory was the first model to deal with the fountains of the great deep, placing them below a ten-mile thick crust, the remnants of which are now the continental crust. It proposes that the Flood was caused by the earth's crust cracking open to release reservoirs of subterranean water (2001: 254-55), but the cause of this cracking is unstated. These cracks resulted in the formation of "hydroplates," which later divided to form the present continents.

The great strength of this theory is that it tries diligently to give a proper place to the Scriptural data, without at the

same time ignoring the findings of science. It acknowledges that the Bible indicates Peleg lived two generations after the Flood, that the division in Peleg's day was of the land, and that the language expects the action of water (2001: 254). However, Brown does not accept that the continents themselves began dividing in Peleg's day. He states,

If this [the continents breaking and beginning to drift in Peleg's day] happened, *what broke them apart?* Worse yet, *what moved them?* Those who accept the plate tectonic theory believe continents have broken frequently— geologically speaking. To stretch and break a thick slab of rock requires, among other things, sliding it horizontally against an enormous frictional force...Simultaneously, another force must stretch the slab, like a rubber band, until it breaks. Plate tectonics cannot provide either force. Therefore, you can safely offer to move a continent (provide one force) if someone would break a continent (provide both forces) (2001: 254).

As I will show below, I think there are satisfying answers to Brown's questions. I do not believe that the continents have



Geological Survey of Canada

Folded mountains near the Sullivan River, British Columbia, Canada. Mere uplifting action could not have formed features like this, which require a horizontal compressive force. The action can be likened to what happens to the crumple zone of a car in a collision, and reflects the forceful impact of the western coast of North America into the Pacific Plate. The smooth deformations contradict the "millions of years old" tale of mainstream geology, while the integrity of the layers shows they had partly solidified prior to deforming, indicating the tectonic processes building the mountains began some time after the Flood had ended, not during the Flood itself.

broken “frequently,” but just once; that Allan and Delair identified the force able to rend Pangaea asunder; and Nelson identified forces that could assist the plates’ continuing separation over the asthenosphere after the break. But in Brown’s thought, such forces could only be found at the time of the Flood. So he understands the Peleg earth-dividing event as not due to continental drift, but to rising seas as they compensated for the slow “deflating” of the subterranean water chambers under the continents in the centuries following the Flood and overflowed low-lying land. He is also forced to explain the thin sediment layer on the ocean floor as due to its gradual sinking into the earth’s mantle. I do not think he has good support for this suggestion.

Other critics of the theory have pointed out that the earth’s rocky crust does not float, therefore it could not have been buoyantly held above massive underground water chambers; since the temperature of water rises with depth, waters at the depth proposed by Brown would have reached the surface as superheated steam, poaching the Ark and its travelers; and there is no erosional evidence of the release or subsequent draining back of the proposed subterranean waters (Wikipedia 2009).

To summarize, this model views the Flood as the direct cause of the division of Pangaea’s single landmass, so it does not permit Genesis 10:25 to refer to continent separation. The Peleg event is equated with division of the earth by rising waters, not by continental drift.

Catastrophic Plate Tectonics

“CPT,” as it is popularly known, is another theory that attempts to give proper place to the Scriptures, but with mixed success. It posits “runaway subduction” (extremely rapid plate tectonics), including downwarping of former oceanic plates into the mantle, as the mechanism driving the Flood. This resulted in the continents being split apart and dragged across the surface of the earth, with the Flood being a side effect of all this incredible tectonic activity. It interprets the “fountains” of Genesis 7 as superheated water jetting into the atmosphere after encountering hot mantle rock from a split in the earth’s crust, a phenomenally violent event (Snelling 2007).

Due in part to its promotion by some influential creationist organizations, this theory is presently quite popular in wide segments of the evangelical church. Although it proposes no triggering mechanism to start the process of runaway subduction, once begun, and given the starting conditions of its computer model, the calculations do present a scenario that appears, at first examination, to be quite consistent with a Biblical viewpoint. It also has the advantage of providing a better explanation than that offered by Brown for the very thin, virtually sediment-free crust in the ocean basins:

A compelling logical argument in favor of this mechanism is the fact that there is presently no ocean floor on the earth that predates the deposition of the fossiliferous strata. In other words all the basalt that comprises the upper five kilometers or so of today’s igneous ocean crust has cooled from the molten state since sometime after the Flood cataclysm began...Presumably, there were oceans and ocean floor before

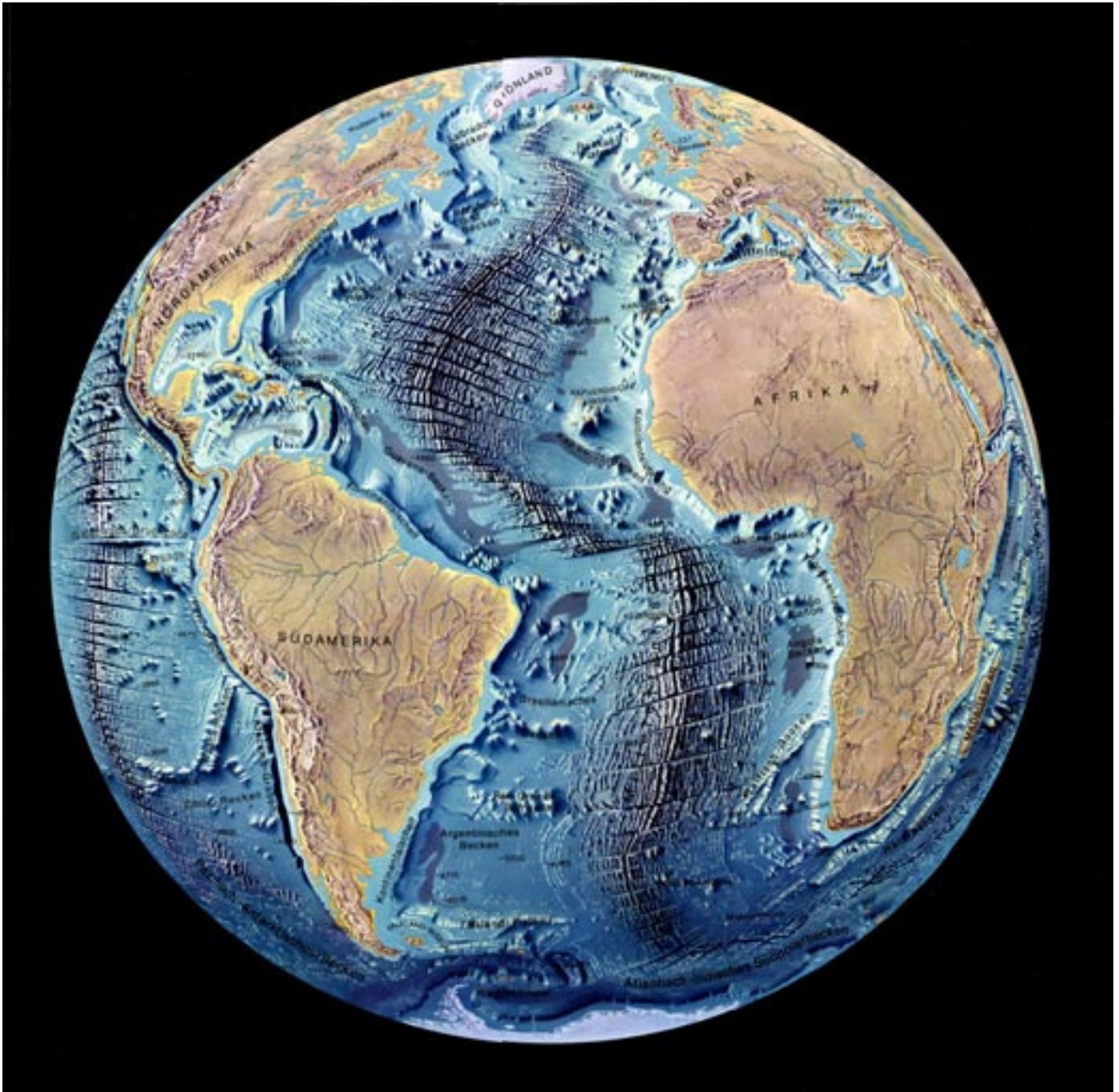
the Flood. If this pre-Flood seafloor did not subduct into the mantle, what was its fate? Where are these rocks today? On the other hand, if the pre-Flood seafloor did subduct, it must have done so very rapidly—within the year of the Flood. In regard to the fate of the pre-Flood seafloor, there is strong observational support in global seismic tomography models for cold, dense material near the base of the lower mantle in a belt surrounding the present Pacific ocean. Such a spatial pattern is consistent with subduction of large areas of seafloor at the edges of a continent configuration commonly known as Pangea (Baumgardner 1994).

Although it appears likely subduction has occurred in the Pacific, the spreading out of post-Flood sea floor basalts in the Atlantic basin need not have been in the context of runaway subduction. It could have taken place via the gradual separation of continents beginning at the Mid-Atlantic Rift, when magma upwelling from the Rift into the expanding Atlantic basin compensated for oceanic crust subducted from the Pacific floor. This concept would bypass some serious problems with CPT pointed out by others, notably that the tremendous release of energy involved in runaway subduction would probably boil off the earth’s oceans, making a global Flood impossible; at the very least, it would probably kill virtually all ocean life, which obviously has not happened. It additionally offers no good explanation for most of the geological data that is well explained by conventional plate tectonics (Wikipedia 2009).

As briefly mentioned, the theory proposes no trigger to start the process of runaway subduction. Not only that, we are in no position today to conclusively know the mantle conditions within the early earth, such as how fluid the mantle was or how stiff were the continents, so we have to take our present understanding of mantle dynamics and extrapolate them back into the distant past. This makes the model’s starting conditions theoretical.

Another major point CPT chooses to ignore is the fact that Scripture presents the Flood event as one where the action of water, from below and above, is at the forefront, as discussed under “Hydrology” above. In contrast to the water-focused picture given in Genesis, CPT makes the Flood a byproduct of tremendous geophysical changes happening deep in the earth. It is driven by geophysics considerations, on which Scripture is entirely silent. This is not a strong Biblical foundation on which to build such an important theory.

Finally, the nature of the Peleg’s division is not addressed by this theory. Neither does it appear to take a position on whether there was originally a single continent before the Flood. This is not surprising, since the radical reworking of the earth from runaway subduction makes it superfluous to view the Peleg event as one involving a literal breakup of the earth. It may be assumed that the CPT advocates therefore view the Peleg event as synonymous with a Babel “division” of languages. If so, this would appear to be an example of a scientific model imposing limits on how Scripture can be understood, rather than the other way around.



Atelier Berann, www.berann.com

The Mid-Atlantic Rift is depicted in this rendering by noted artist H.C. Berann. The Rift is regarded as where the North and South American plates split from Europe and Africa, an event which probably took place at the time “the earth was divided” in the days of Peleg.

Setterfield’s Early Earth Model

A third model that has received acceptance by many Bible believers is that of Barry Setterfield, and I have drawn many ideas from him into my own synthesis. He has done some remarkable work in the areas of geology and chronology, particularly with his groundbreaking studies showing a decrease in the speed of light over time, which offers a way to reconcile radioactive dating methods with a Biblical timeline. We will just concern ourselves here with his perspectives on the Peleg event.

Setterfield agrees with my conclusions that the Peleg event

involved a literal earth division, took place some 200 years after Babel, and involved a separation by water (Setterfield 2009). However, he also envisions a major role for the effects of mantle heating due to the breakdown of short-life radioactive elements, a suggestion I am somewhat uncomfortable with. It strikes me as raising a “ticking time bomb” theological problem: that God programmed into the very fabric of the Creation, even before the Fall, the seeds of its eventual radioactive heat death. For example, he attributes the explosive demise of a former planet between Mars and Jupiter, yielding the asteroid belt (a point I think makes sense), to radioactive internal heating. I prefer to

attribute this to the influence of a Roche limit-violating pass by an intruding celestial visitor (discussed below), since this idea not only can account for the asteroid belt, it has the further advantage of explaining the origin of certain post-Flood mythological stories and catastrophe indicators. The latter include caves that are mass graves of animal bones, and far-flung “erratics,” huge stones somehow transported far from their origin.

Setterfield’s orientation toward finding solutions in radioactive decay extends to his understanding of the “fountains of the great deep.” He writes,

After creation week, the interior of the earth began to heat up from the rapid decay of short half-life radioactive elements as a result of high light-speed values. This radioactive heating drove the water out of serpentine, and other minerals in the mantle, towards the earth’s surface. This water came to the surface as springs and geysers and watered the ground. This is confirmed by the earliest known translation of the Pentateuch, the Septuagint (LXX), that originated about 285 BC, and from which the Patriarchal dates in this Summary are taken. The LXX specifically states in Genesis 2:6 that “fountains” sprang up from the ground. These fountains and springs probably watered the whole landmass of the single super-continent that made up the original land surface of the earth. In the surrounding ocean, this continuing water supply was called the “fountains of the deep.” On a greatly reduced scale, a similar phenomenon still occurs today with the “black smokers” of the South-East Pacific Rise (2009).

This is an attractive explanation; I just would not go so far as to think the processes making it possible would eventually lead to planets blowing up! Since I have not noted an effort to connect this theory with observations by the ancients of activity in the heavens, for this reason I think it falls a little short of being a comprehensive explanation of the Peleg event.

Nelson’s Inertial Forces Model

Yet a fourth model proposes that the Peleg event was indeed an earth-dividing one, but uniquely explains it as due to Ice Age ice-load imbalances. This is the central thesis of David Nelson’s book, *Peleg: Early Earth Movements*. He proposes that the Ice Age began soon after the Flood, with tremendous snowfalls glaciating the northernmost and southernmost areas of the single original continent, which came out of the Flood essentially intact. The great weight of ice concentrated at the poles caused the earth to become imbalanced. As various forces related to the spin of the earth on its axis—including the conservation of angular momentum, centrifugal force, and precession (2007: 30–38)—acted on these unbalanced masses, they generated stresses that eventually, in Peleg’s time, fractured the crust. Thus were formed the various tectonic plates, which then were forced further apart over the asthenosphere as they continued to be acted on by the various forces striving to bring the surface of the globe into balance.

This work reveals some innovative “outside the box” thinking I find very refreshing. It hinges on one great, unproven

assumption, though: since it depends on glaciers to provide the unbalanced weight required to break Pangaea apart, it assumes the Ice Age began soon after the Flood, prior to Peleg’s day. Although I did not find it plainly stated, this idea seems consistent with the ideas of Michael Oard, set forth in his book *An Ice Age Caused by the Genesis Flood*, which suggests that warm oceanic waters in the aftermath of Flood-related tectonic activity allowed the tremendous snowfalls that brought on the Ice Age. If, however, we restrict ourselves to the text and do not read massive tectonic activity into the Flood story, we lose the source of ocean warming required to trigger the Ice Age. And without an Ice Age beginning many years before Peleg, we lose the glaciers Nelson says weighed down on Pangaea.

Even if I am wrong about the timing of the Ice Age, and it did begin before Peleg’s birth, it seems unlikely that enough time would have passed for the glaciers to have built up sufficient mass in the space of five generations to provide the required inertial imbalance needed to fracture Pangaea. The theory also has difficulty explaining the phenomenon of quickly frozen mammoths that still had grass in their mouths and appear to have been asphyxiated (Brown 2001: 165). Such rapid freezing, causing suffocation as the very lung tissues froze, is only explicable if the earth’s axis had suddenly shifted, abruptly moving the mammoths at high speed from a more temperate clime into the polar regions, with an associated enormous wind chill factor as the atmosphere did not keep up with the movement of the globe. This kind of rapid shift could only have been caused by a celestial source, either by direct impact with earth or due to the action of powerful gravitational and electromagnetic forces on earth as the intruder passed by. The mammoth scenario is impossible to imagine from even the most rapid plate tectonic movement.

One noteworthy observation Nelson makes is that when sediments settle out of water, they do so as level layers unless disturbed. Such level strata is what we see in the Grand Canyon. Yet at the same time, sedimentary rocks all over the world, though maintaining their clear layering, display the action of deforming forces. Folds and faults are seen in road cuts and quarries; jagged mountains reveal sedimentary layers twisted and thrust out of the horizontal plane they must have originally lain in. It stands to reason that, whatever the powerful forces were that deformed the sedimentary strata deposited by Noah’s Flood, they had to have acted sufficiently long after the Flood for the layers to have had time to firm up and maintain their integrity during deformation. This is an important observation! That the layers remain distinct, rather than slumping and mixing during the tectonic activity, indicates the time of this great tectonic activity was NOT at the time of the Flood, but later. This flies in the face of both the Hydroplate Theory and CPT, which posit tremendous tectonic activity right at the time of the Flood itself.

Most secular geologists ascribe the great mountain-building period to the Pleistocene Epoch, that is, the Ice Age, which all variants of Flood geology place some time after the Flood. Nelson says:

Having described these geologic pictures, we can make this firm assertion: Almost all mountains in the world were formed after the Flood and during the period of the Glacial Epoch...The Ice Age was a time of mountain building; it was,

geologically, incredibly active. How do we know that this is true? Because, (1) the level-lying Flood sediments had to have time to harden sufficiently, and (2) mountain building forces changed the orientation of the horizontal sedimentary layers, especially with glacial deposits on them, altering them into new angles and folds, all *after* the sediments were laid and the glacial deposits remained (2007: 26)

Before Peleg, essentially all sediments were level...If mountain building had been exclusively part of the Flood-year's crustal upheavals, or if mountain building developed immediately after the Flood, the wet and loosely bonded sediments of that deluge period would have been skewed, distorted, or dumped off the elevating granites. The appearance of such (hardened) sediments, would be different than what we see today. Therefore, mountain building came later. On the other hand, at the time of Peleg, the sediments were still not fully hardened, and were not fully "strong" when Pangaea's division and mountain building began. Therefore, being pliable at the time of Peleg, most sediments on the crust would bend without fracturing or melting (2007: 45).

These observations indicate that it is an error to ascribe powerful tectonic activity to the Flood event. As Scripture also indicates, it was primarily a water event, not one driven by mantle dynamics; the latter began shortly before the birth of Peleg. We need to look for a synthesis of the strongest points of the various theories presented, supplemented by additional information, to arrive at an intellectually satisfying model that, so far as possible, also does not go beyond what Scripture reveals.

Hints from the Mid-Atlantic Rift

This completes our survey of the existing models. Before going on to consider the Phaeton theory, I want to make some comments about the significance of the Mid-Atlantic Rift. I believe it is a remnant of a disaster—literally, a *dis-aster*—a "bad star," according to the Greek roots. A crack in the earth's crust like that would not occur without a powerful external influence to cause it. It is a scar that marks the place where a force from outside the earth, not within it, acted to split North and South America from Eurasia. It needs to be placed within a model that recognizes its origin in a disaster that changed the face of the Earth and dramatically impacted the human race.

Setterfield offered helpful comments on the mechanism at work to open up the Mid-Atlantic Rift and divide the continents:

On earth several asteroid impacts closed the Mesozoic Era, about 65 million atomic years ago at the Cretaceous/Tertiary boundary. The dinosaurs would have been decimated. Wild fires destroyed much vegetation. The layer of iridium from asteroid impacts and soot from the wild fires is virtually global. This was the time of Peleg in the fifth generation after the Flood (Luke 3:35–36) when the continents were divided (Genesis 10:25). When the light-speed correction is applied, the atomic date for this event closely approximates to 3025 BC. The basaltic Deccan Traps in India, whose origin may have been either through an igneous event or an impact

related mantle magma plume, were also outpoured at the time of this disaster. If an impact origin for the Deccan Traps is discounted, the major impact at this time was in the Yucatan (near the mid-Atlantic rift) leaving a crater at least 150 km [93 mi] wide. Other impacts at this time also formed the Manson, Karn, Kamensk and Gusev craters. The significant Lunar crater Tycho also dates from the late Cretaceous. It is thus possible that this event was contemporaneous with the formation of these other craters, as the light-speed correction brings it very close to the BC date for Peleg on the LXX chronology.

It is interesting to note that when rocks and metals melt, their volume increases by 10%. When this is applied to the entire earth, there would result an increase in circumference of about 18%. At the time of Peleg's life, the interior of the earth would have become entirely molten, and the pressure being exerted on the outer crust incredible. The aforementioned asteroid bombardment is all it would have taken for the pressure to start being released from the interior and the earth's crust to begin 'unzipping.' We can see where this occurred primarily along the Atlantic Rift, which is still seeping magma. The maximum width of the Atlantic is about 4700 miles (near the equator), which represents an 18% expansion of its original circumference (2009).

The Phaeton Hypothesis

To create a synthesis that is as Scripturally consistent as possible, we need additional information to fill in some gaps not addressed by the above theories. I believe this is provided by the Phaeton Hypothesis.

In 1997, Derek S. Allan and J. Bernard Delair published their book *Cataclysm! Compelling Evidence of a Cosmic Catastrophe in 9500 B.C.*, originally released in 1995 as *When the Earth Nearly Died: Compelling Evidence of A Catastrophic World Change 9,500 B.C.* Allan is a researcher specializing in palaeogeography and cartographic evidence for climatic and land-form change in recent geological times, while Delair is a geological surveyor and researcher with a special interest in the impact of past events on the present distribution of animals and plants. It is unfortunate that books from the publisher, Bear & Company, are often regarded as New Age rubbish, because this particular work is actually one of scholarly substance that deserves a wide reading. The thing that does not fit is the timing they place on it, approximately 9500 BC. I am inclined to take their chronology with a big spoonful of salt, but without discounting the data documented by their prodigious research.

To give an overview of the book, I cannot do better than to quote one anonymous reviewer's remarks:

When the Earth Nearly Died carefully documents the fascinating story—which has never been told before in such detail—of how this Golden Age of peaceful conditions and equable climates ended traumatically in a tremendous catastrophe about 11,500 years ago. This was part of a cataclysm which disturbed the whole solar system, destroyed at least one sizable planet and its satellite, and also severely

devastated Mars and Earth.

Among the fundamental geophysical effects experienced by Earth were a massive fracturing of the crust, a realignment of Earth's axis, elevation of new mountains, and widespread rearrangement of land and sea. These changes were accompanied by an appalling global conflagration, a gigantic flood, and what has been described as 'collapsed sky' conditions. A bombardment by debris from the disintegrated satellite of the destroyed planet added to the worldwide chaos.

Much of Earth's animal and plant life was annihilated by these frightful events. Remains were often buried hundreds of feet below and within vast new deposits which smothered huge areas, both on land and under the sea. Elsewhere they lay piled in caves, choked rock fissures, or were massed into veritable hills. Some havens and refuges did exist, offering shelter to various faunal and floral species from flood or fire—then to have to endure the appalling conditions which followed. These included intense cold, occasioned by chronic atmospheric pollution which severely restricted the solar radiation reaching the Earth, loss of vital resources such as shelter, tools and sources of warmth and nourishment. The extent of the damage was so great that the immediate survivors found themselves literally catapulted into what was, in effect, a new world.

The possible origins of this terrible calamity are considered in some detail, the authors concluding that, after dismissing comets, asteroids and giant meteors, the most likely candidate is a supernova explosion which, on the astronomical scale of things, occurred uncomfortably close to our solar system relatively recently. This story is told from different perspectives: from the study of terrestrial organic remains; evidence from present land-forms; the testimony of geophysics and astronomy; and the traditional accounts and memories of numerous peoples round the world. It becomes clear, in the process, that modern science's invention—"the Ice Age"—evades abundant important evidence which points coherently to a rather different interpretation of events (Knowledge Computing 2009).

When we read over this summary and think about it, it is obvious that the catastrophe described could not have been Noah's Flood. For one thing, it speaks of animal remains piled up in caves. These bone-caves, which Allan and Delair call "subterranean charnelhouses" (1997: 111), are limestone caverns that could not have been pre-Flood (limestone is a sedimentary rock). They contain a vast assemblage of different species, generally large mammals dated by mainstream science to the Ice Age. Such caves also almost always open to the north or northwest—the same axis of orientation as the Carolina Bays (1997: 281–89)—indicating the disaster that overtook them came from that direction. This directional orientation is likewise inconsistent with the universal Flood. A different disaster had to be in view, one that occurred sufficiently later than the Flood to allow large numbers of the Pleistocene megafauna to develop.

The authors, though recognizing a period of intense cold overtaking the earth that can appropriately be called the Ice Age, reject the conventional theory that it endured for thousands of years. The reviewer observed,

Nearly all the phenomena ascribed to conventional Ice Age theory can be interpreted as the result of natural convulsions of worldwide proportions. The authors—citing much reputable supporting evidence—argue that the great mountain ranges of today and the great crustal displacements which, along with enormous seismic and volcanic eruptions, changed the face of the Earth, in fact happened violently, rapidly and comparatively very recently (Knowledge Computing 2009).

This is exactly the kind of picture we would expect from the Bible—an Ice Age that lasted for just a very short time, likely around the time of Job (Northrup 1996). Barry Setterfield also comments on this:

Because of the destruction caused by these events, and the new rigorous weather conditions, numbers of people were probably forced to seek shelter in caves. They would have to get sustenance where they could find it, hunting animals, digging up roots and getting what food they could. Suitably shaped rocks would have had to suffice for weapons, even before wood and/or bone were used. After conditions had stabilised, and basic needs had been met, there would be time to re-establish civilisation, work with metals, plant corn, and build homes. This trend is simply the recovery sequence from a series of huge natural disasters. The book of Job was probably written at this time, as a study of its contents reveals familiarity with many of the processes mentioned above. Indeed, Job is probably an abbreviated form of Jobab who is listed as a nephew of Peleg in Genesis 10:29. From a linguistics point of view, Jobab and Job in the Hebrew texts of Genesis and Job can be the same name in different families of the same language group. Therefore, with Peleg as his uncle, it seems that Jobab probably lived during those traumatic times (Setterfield 2009).

The reviewer of *Cataclysm!* also observed,

From this kind of evidence, a picture is built up of a world, during the time of modern man, that was very different from what we have now; of a large landmass continuous from northern Siberia to Alaska; of another linking N W Europe with Greenland; of an enormous continent connecting South America, Africa and the southern Indian Ocean; and of another, now mostly submerged, in the South Pacific (Knowledge Computing 2009).

This is just another way of saying that the evidence indicates that the original continent, Pangaea, survived the Flood period and only later broke up.

How do the authors explain all of this evidence? They attribute it to what they call the "Phaeton event." This event provided the tidal forces by which the breakup of the single continent into multiple plates was initiated at what became the Mid-Atlantic

Rift. During the continued flyby of Phaeton, the separate plates were ripped apart and sent sliding off in multiple directions over the asthenosphere, with many residual effects. The magma release and plate friction associated with this event brought about the climatic effects proposed by Oard in his monograph, *An Ice Age Caused by the Genesis Flood*. The resultant disruption of civilization brought about a Dark Age in most parts of the world, during which the knowledge carried over by the Flood survivors and their immediate descendants from the old world, and which was reflected in the high level of civilization up to then (think particularly of Egypt), was largely lost and became a mystery.

Could the Continents Slide AFTER the Flood?

The above observations also bear upon a major criticism proposed to the idea that the continents could have moved *after* the Flood. It is often alleged that any event that would cause actual earth movements in Peleg's day would be as disastrous as the Flood itself. Who could survive it? But there are some unexamined assumptions lying behind such thinking. One is that in Peleg's time, the crust of the earth was as stiff and rigid as at present, so that continental movement would result in "superquakes" that would have spread death and destruction on a par with that wrought by the Flood itself. This is not necessarily true. The layers deposited by the Flood would not have fully solidified for many years, so that deforming forces probably would not have caused the abrupt cracking involved in today's earthquakes. In addition, we have already observed that the properties of the asthenosphere are conducive to allowing crustal plates to slide. It seems reasonable to conjecture that in the first few centuries after the Flood, the asthenosphere was much more hydrated than at present, therefore more fluid and providing better lubrication for continent movement, once the required torsional force—from the gravitational pull of Phaeton, a remnant of the Vela supernova (Allan and Delair 1997: 209–210), passing close to the earth—was provided.

Another point to meditate on is that, as Allan and Delair repeatedly document, cultures all over the world have recorded "warfare in heaven" that cannot be connected to the Flood. The "myths" of the ancients about activity they themselves witnessed in the heavens are consistently repeated, and point to a core of truth. In this regard, the authors quote Ignatius Donnelly's observation made in 1894:

Legend has one great foe to its perpetuation—civilisation. Civilisation brings with it a contempt for everything which it cannot understand; skepticism becomes the synonym for intelligence; men no longer repeat—they doubt, they dissect, they sneer, they reject, they invent. If the myth survives this treatment, the poets take it up and make it their stock-in-trade—they decorate it in a masquerade of frippery and finery, feathers and furbelows, like a clown dressed for a fancy ball; and the poor barbarian legend survives at last, if it survives at all, like the Conflagration of Ovid, or King Arthur in Tennyson—a hippopotamus smothered in flowers, jewels and laces (1997: 149).

This brings us to a consideration of the Conflagration of Ovid. The authors quote Ovid, who tells how a celestial body, called Phaeton, approached earth and wreaked fiery havoc:

The earth bursts into flame, the highest parts first, and splits into deep cracks, and its moisture is all dried up. The meadows are burned to white ashes; the trees are consumed, green leaves and all, and the ripe grain furnishes fuel for its own destruction (1997: 151).

Consistent with Ovid are the remarks by the classical Greek writer Hesiod. In his *Theogony* he described a celestial body he calls Typhon, which like Phaeton caused a great conflagration that was later followed by a great flood. I do not believe this was Noah's Flood, but rather the event which swept the animals into their cave crypts as the continents, sliding on the asthenosphere, moved through the ocean to new locations. That this was the time of the great mantle activity is also indicated:

Other effects produced by the great heat associated with this conflagration are common to many flood traditions. For example, from Persia, we have the statement that: "The sea boiled, and all the shores of the ocean boiled, and all the middle of it boiled". The cause of this heating was ascribed to the 'star' *Tistrya*, "the leader of the stars against the planets"—note that more than one 'star' is indicated; and it was accompanied by an incredibly violent hurricane.... Several North American traditions refer specifically to the phenomenon of superheated water: "Great clouds appeared... such a great heat came, that finally the water boiled. People jumped into the streams and lakes to cool themselves, and died" (Allan and Delair 1997: 152).

It is not my intention to quote the whole book. The above excerpts should be sufficient to make my key point: that ancient records, taken together with actual field data, indicate a harmony with the Bible that hinges on understanding the Peleg event as a division of the earth. The mythologies of warfare in the heavens found all over the world (Tiamat and Marduk, etc.), must be ascribed to post-Flood times. These stories could not have been passed down by the Noah and his family, who were in no position to observe anything extraordinary happening in the heavens during the time of the Deluge; the clouds pouring out torrential rains, plus their tightly enclosed status on the Ark, makes this an unreasonable suggestion. Any stories that deal with observations in the heavens must have been made by the post-Flood descendants of Noah, and the days of Peleg is the only Scripturally-warranted suggestion we can make.

In conclusion, tying the Phaeton event to the Peleg event resolves many of the problems of other theories. Among other things, it gets around the "ticking time bomb" theological problem, and recognizes the importance of data that other secular theories ignore. The asteroid impacts envisioned by Setterfield as the cause opening the Mid-Atlantic Rift find their origin in Phaeton's effects as it passed through our solar system, effects which were observed by earth's inhabitants and recorded in their writings.

A Satisfying Framework for Early Earth History

The concept that the single continent of Pangaea existed until the time of Peleg allows us to understand Scripture in a straightforward manner without allowing scientific theory to lead Bible interpretation, and provides a satisfying framework for understanding numerous mysteries of early earth history. In addition to the advantages already discussed, it allows for a few hundred years of relatively easy human migration following Babel to widely separated places, without resorting to hypothetical land bridges or sophisticated ocean navigation knowledge by the first few generations following the Flood. (Such knowledge does not seem likely to have been possessed by the early, land-locked inhabitants of Mesopotamia.) An easy answer is also given to the question of how marsupials could find a home in Australia following the Flood—they just walked there! Isolated continents and impassibly high mountains did not exist at that early time, only developing in succeeding centuries as continued post-Flood earth turmoil and the Ice Age wrought geological change on a grand scale. The resulting geographical isolation led, via inbreeding and selective pressures imposed by different environments, to the development of the various races of human beings, as well as providing safe havens from predators for various types of vulnerable animals, like the Dodo birds.

Finally, the enormous environmental damage envisaged in the Phaeton hypothesis, likely damaging the atmosphere's ability to shield the earth from cosmic rays and allowing the release of underground radon, also provides a rational basis for the remarkable lifespan plunge at the time of Peleg:

SHEM: 600 years (last of the true antediluvians)
ARPHAXAD: 438 years (first generation of post-Flood world, less healthy than antediluvian environment)
SHELAH: 433 years
EBER: 464 years
PELEG: 239 years (lifespan halved—what happened?)
REU: 239 years
SERUG: 230 years
NAHOR: 148 years (an anomalously short life)
TERAH: 205 years (the downward trend continues...)

It is clear that there was a sudden drastic reduction in average lifespan when one compares Arphaxad > Eber with Peleg > Serug. I submit that only a radical change in the environment that damaged the durability of the human genome can explain this, a change triggered by an extrasolar visitor in Peleg's day. How could mere confusion of languages have so impacted human longevity?



Notes

¹ A similar process is perhaps taking place today in the Afar Triangle region of Africa (Bojanowski 2006).

² For a detailed discussion of their differences, see http://en.wikipedia.org/wiki/Flood_geology.

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