

A WALK THROUGH TIME
A STUDY IN HARMONIZATION

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ABSTRACT

It is shown that Biblical history presents more than one geologic catastrophe in earth history. The Bible gives information on four major catastrophic periods in history which were largely responsible for earth's present geology. Scientific evidence including the geologic column is offered to substantiate this.

INTRODUCTION

Centuries ago in the land of Greece, observant men began to notice fossils in the crust of the earth and wonder if these might not record something of earth's history. Modern man has gone far in his study of the rocks and has come to the erroneous conclusion that earth's history stretches over four billion years. Modern scientists read into the earth's physical record of deposits their preconceived conclusions, assuring themselves that life slowly evolved to its present glorious state during such a period of time. This is a thesis that is built solidly upon intensive research on the record of the rocks even though based upon presuppositions. I have little argument with the actual field research and feel that much of it is of immense value to us as creationists if we would understand the physical history of the earth in real depth. However, I observe that the elaborate thesis of an evolutionary history of earth's lifeforms entirely as the result of the operation of time, chance and some undefined impetus to evolve is built upon two postulates which remain totally unproven. In spite of the fact that man has been able to build radioactive clocks which he has adjusted and reads presuppositionally, he has not achieved absolute dating. What he has achieved is an argument in a circle. He has adjusted his clocks to agree with his conclusion about what time it is! After careful manipulation, his clocks told him exactly what he wanted to know about historical time. He was not seeking to know the truth. He actually was seeking to avoid the truth. His theories concerning geological time have continued to expand steadily by millennia until recently. Then the calendar became frozen by "absolute time" conclusions which he had derived from the way he had set his clocks.

Now I want you to do something with me. Let's go for a walk through time, starting as near to the beginning of time as we can at the bottom of the Grand Canyon. Here we are among some of earth's earliest formations.

If you have accepted geological time and its parent presupposition, biological evolution, would you lay these aside for a few moments and reexamine some interesting facts about the historical record that point to another conclusion?

Let's look at some forgotten pieces of evidence which remarkably suggest that the record has been misread because of these presuppositions. What happens when one plays the geological record at Biblical speed? When we remove the philosopher's thumb from the turntable of the record of the rocks, we will find that the recording machine actually makes remarkable sense when played at Biblical speed. Suddenly the two records of earth's history merge into one! The record studied by the historical geologist suddenly booms out in stereo, agreeing in a phenomenal way with the very extensive scientific data found in the Bible.

FIRST BIBLICAL GEOLOGICAL CATASTROPHE

For example, look at this canyon. The Colorado River roars by us, tumbling through a great rapid. When did it carve this great canyon? How often have geologists sneered at the brevity of Biblical history as they began to indoctrinate their students! Have you ever heard one say something like this? "Quantitative measurements conclusively prove that the Colorado River could not possibly have carved this canyon in 6,000 years!" I quickly agree. The silver sheen of this river belies the enormous power which produced this canyon in very

short order. Thousands of feet of post-Noahic flood ice age waters, backed up in the Kaiparowitz Basin to the east by the Coconino uplift, flooded over the Mesozoic sands which temporarily had covered this area. The major carving of the Grand Canyon probably was accomplished in a few weeks! The temporarily empounded waters of this great lake left beaches that are readily visible above man-made Lake Powell and elsewhere today. When these waters overflowed the uncemented Mesozoic sands, they sliced down through them swiftly, allowing a 2,000 foot head of water that lay above the Kaibab limestone to rip open the older crosshatched faults which lay buried in the Paleozoic and older formations. Side canyons were swiftly incised in the side faults. The fact that the supply of eroding water quickly lowered as the main canyon was cut, left these side canyons as juvenile, untapered box canyons that testify of the rapidity of the event. Furthermore, the absence of river polish in any location except along the present stream or in the bed of tributaries proves that the present flow did not carve the Grand Canyon slowly.

One neglects a significant, subordinate revelatory source when he fails to consider the record of the rocks in the light of Biblical time. Let me show you what I mean in a brief survey of the two records. In Genesis 1:1 the creation of the heavens and the earth is recorded. No one will be surprised to find that the first era of historical geology is the "Azoic era," the "no life period of time," which, according to students of earth's physical record, was the time when the universe and earth came into being. There are no "Azoic" formations found in the Grand Canyon.

Now Genesis 1:2-8 describes the newly formed surfaces of the earth as already existing because of Creation in the first verse of Genesis, but now covered by universal waters. While the geologist will scrupulously avoid any term that suggests a "universal flood," this description of the formation of the sea and earth's atmosphere is in perfect accord with the geologist's concept of Archaeozoic time. The deposits of this period are unfossiliferous and are largely waterborne. There is no way that one can harmonize this material with the gap theory with its judgmental catastrophe which destroys a primeval earth and its imagined population. For that matter, any actual field study of the very real geological column which is found in the earth will soon convince one that there is no way that one can associate all of the physical record with this pre-Adamic flood. There are far too many sub-aolian wind and volcanic deposits present in the world for that false conclusion. Rather, this pre-Adamic universal flood which plainly is described in Genesis 1:2-8 is the FIRST BIBLICAL GEOLOGICAL CATASTROPHE which we must recognize in order to understand the physical record of historical geology. It is one of those great acts of God which helped to prepare the surface of the earth for man's habitation.

SECOND BIBLICAL GEOLOGICAL CATASTROPHE

In unwitting harmony with God's command for the continent to appear above sea level in Genesis 1:9, geologists recognize that the Archaeozoic is a time of great uplift with remarkable compression and folding. This took place when the continent lifted abruptly out of the sea in the third day of creation. This is THE SECOND BIBLICAL GEOLOGICAL CATASTROPHE which must be recognized if one is to understand the Biblical events. Its primary effects may be readily recognized in the dark Vishnu Schists of the inner gorge in the Grand Canyon. They not only preserve evidence of their marine deposition by that first flood; they are dreadfully contorted by the heat and pressure of an abrupt movement of vast proportions. These black, hard materials have been heated to the point that their layers either have flowed like plastic or have completely refoliated in near vertical orientation. While briefly described in the Bible, the language nevertheless is precise: "Let the waters be gathered unto one place and let the dry land appear." What a catastrophic morning that must have been!

Now whereas the Archaeozoic deposits seem to have no fossils, the geological deposits which result from this great uplift do have marine plant fossils. These are late pre-Cambrian or Proterozoic formations. Surely it is significant that, in the creation record of Genesis one, plant lifeforms were created on the same day as that great uplift of the continent. From the third day onward, plant life existed. Hints of marine plant life have been considered in the Bass Formation,(1) in the Hakatai shale,(2) and in the Dox sandstone.(3) The pollen finds of Burdick in the Hakatai shale(4) strongly require that these deposits be related to that portion of the creation week after plant life had been created. The massive amounts of oxidation present in the Hakatai shale require the humid kind of an environment which would have been present after the abrupt elevation of the land mass on the third day. However, there is a strange inconsistency present in the discussion of many of the dehydration beds of the Grand Canyon. I cannot account for the following conclusion about the arid climate present during the deposition of the Hakatai shale. For example,

The Hakatai shale was deposited in shallow water with periods of emergency in an arid climate. The mudstones are probably mud flat deposits formed as the sea retreated after deposition of the Bass Formation. (5)

I conclude that the rest of the creation week is completed while the vast Proterozoic layers continue to be deposited by waters which continue to drain off the uplifted continent. This phenomenon is clearly described in Psalm 104:10-18.

Now according to the Biblical record, active deposition of geological deposits should have slowed to insignificance after the creation week, for there is a 1,500 year period with no mention of geological activity between Adam and Noah. What do we find in the record of the rocks in the Grand Canyon and elsewhere? Harmony! Geological history has the same universal break in deposition, for the subsequent fossil rich Paleozoic deposits lie unconformably without gradation upon the older, scarcely fossiliferous Proterozoic deposits. Indeed, the formations stand in remarkable contrast in many ways. There is a giant leap in the nature of the fossil lifeforms which suddenly are deposited on the sea bottom. In the Bright Angel Canyon below its juncture with Roaring Springs Canyon this remarkable transition is readily observable in an open cliff face as "the great unconformity."⁽⁶⁾ Though we are thousands of miles from the area where the budding human race lived during this break in geological deposit, we nonetheless observe the quiet interval that lies between Adam and Noah.

These Paleozoic layers form the upper part of the Grand Canyon. In many ways early Paleozoic deposits give evidences worldwide that a vast marine transgression of the land mass above sea level had taken place. Here these are the Tonto group which contain the Tapeats sandstone, the Bright Angel shale and the Muav limestone. Unquestionably, sea waters covered this area entirely. If this is the beginning of the Noahic flood, one should expect similar evidences worldwide. It is interesting to read the confused statements of a European geologist as he attempts to explain that there must have been deposits made above sea level, but they apparently have all been eroded away!

The Paleozoic deposits remarkably entomb evidence of life during a peaceful time on earth when a universal climate made possible life that knew neither ecological nor climatological boundaries. Of course the geologist automatically thinks of the Paleozoic as that period, not realizing that the Paleozoic is but the catastrophic graveyard of life which had lived in the preceding interval. How beautifully this physical record harmonizes with the Biblical record! Life before the Noahic flood existed under a universal hothouse climate caused by the canopy of water vapor which was elevated above the atmosphere as the Divine act of the second day of creation. The effects of this unique supra-atmospheric phenomenon is briefly recorded in the chronologies of Genesis 5 and 11. That interval after Adam may have been chaotic as far as man's sins were concerned, but it was quiet geologically as far as the Biblical record is concerned. However, it ended with abruptness and with violence which man had never known.

THIRD BIBLICAL GEOLOGICAL CATASTROPHE

The third biblical geological catastrophe which should be recorded in the column of physical, geological evidences is the universal Noahic flood. This is a flood which, first of all, would have affected bottom sea life. After all, does not Genesis describe the first of the two sources which contributed to the Noahic flood as coming from the ocean bottom? Indeed, it describes two sources which produced the endless sea which surged across the landmass. When the flood began, the fountains of the great deep broke open in the sea bottom and poured forth vast quantities of water and debris borne by water from the fountains of the great deep. We should not be surprised to find at the bottom of the Paleozoic deposits the Cambrian collection of ocean bottom muds and multitudes of less mobile bottom sea creatures, animals which had multiplied prolifically on the warm bottom of the pre-Noahic ocean. Now, with the beginning of the flood in the ocean bottoms, these had made the transition of the taphonomic interval in moments or hours to enter death and leave record of that death in fossil form. They abruptly were buried in vast layers of mud which prevented any escape. It also made possible their fossilization and preservation as a testimony of the catastrophic nature of the beginning of the Paleozoic "era."

According to Genesis 7:11, these gargantuan flows of subterranean waters were joined by a vast deluge of falling waters as "the windows of heaven were opened." I conclude that these waters are coming for the most part from the canopy of water which had been elevated "up over the top of the firmament." This "firmament" is the atmosphere where the birds fly according to Genesis 1:20. These two sources of waters not only buried many forms of sea life; their encroaching waters now entombed all kinds of shore life, a record misread by the evolutionist as the trail of evolution leading out of the sea and onto the land!

I first pointed out in 1968 that land plants were ripped up and formed into giant floating rafts by the retreating flood. Later these were driven ashore to form great coal beds when the land began to reappear in Genesis 8. During this time, the forms of life which had been best adapted to life and rapid multiplication under the canopy in the pre-Noahic flood period continued to be buried by multitudes. In the plant world, the great family of gymnosperms, the naked seed plants, had prolifically multiplied in the warm hothouse world eco-

zone of the sub-canopy atmosphere. In the animal world, the classes best adapted to rapid multiplication under the canopy had been the fishes, the amphibians and the reptiles. The reptiles would have lived very long under the canopy. The fishes and reptiles best survived the flood. Testimony to the slow maturity and late reproduction of the mammal world fills Genesis 5. Testimony to the change which the absence of the canopy after the flood wrought on the rate of maturity and longevity of the mammals is found in the Genesis 11 chronologies given for Seth's descendants. However, the more mobile sea creatures and reptiles, which could have multiplied rapidly and which would have continued to live very long lives in the jungle-like atmosphere, were far better able to adapt to flood conditions. These survived for the most part to make the period of the Noahic flood's retreat their great burial ground. As a result, the reptiles are quite rare in Paleozoic deposits, just as we should expect in a Noahic flood model interpretation of its deposits.

The scarcity--near absence--of evidence of man and other mammals in the Noahic flood debris may be accounted for by that very fact. On the other hand, many larger animals and man, having larger body cavities, would have floated as they began to decay. These would have been borne off into the deeper existing sea basin surrounding the land mass, there to become food for marine creatures, to decompose and to settle slowly to the bottom, disintegrating on the way.(7) I suspect that one of the reasons why we do not find more than very rare signs of mammals in the Paleozoic deposits is because, according to evolutionary doctrine, they are not supposed to be there! Any evidence indicating their presence automatically would be rejected by the uniformitarian researcher as an intrusion! Furthermore, the creationist should expect to find a concentration in that part of the world where man originated, in the Mesopotamian basin where the garden of Eden had been.

The entire Paleozoic series of the upper Grand Canyon above the Proterozoic, the pre-Adamic flood series, is a marvelous place to study the succeeding events of the Noahic flood. One who approaches the Grand Canyon without macrochronological presuppositions readily may read of the violent and rapid rise of the Noahic flood in a deeper ocean basin in the earlier Paleozoic series. By the time that one has climbed from the Tapeats sandstone up to the great Redwall limestone formation, he should have been able to recognize evidence of the flood's stabilization in that basin. Climbing from there up through the Supai Assemblage, the Hermit shale, the Coconino sandstone, the Toroweap and the Kaibab formations, he has passed scores of obvious signs of the flood's long, oscillating retreat. In these great Mississippian, Pennsylvanian and Permian deposits, the creationist who approaches without monocatastrophic bent will see evidences of the sun's warming rays on mud flats. He will have walked through great dunes left by a fiercely blowing wind. He will have noted hundreds of signs of oscillating shorelines with repeated marine intrusions. He will not have missed the significance of multitudes of amphibians and smaller reptiles climbing out of the water onto the shores of those dunes. He will have been forced to think of the words of Genesis 7:21-22 which told of the deaths of multitudes of land creatures from upon the face of the continent. "And all flesh died that moved upon the earth, both of fowl, and of cattle, and of beast, and of every creeping thing that creepeth upon the earth, and every man: all in whose nostrils was the breath of life, of all that was in the 'elevated, well drained land mass,' died." Perhaps he also will have recognized that marine creatures are exempted from the universal death which came from the conquest of the land mass by the Noahic flood waters. Hopefully his mind will have turned to Genesis 8:1 which describes the sending of that wind by God to dry up the surface of the earth. Above all, the implications of Genesis 8:3 should have become significant to him. "And the waters continued to return from off the earth, going and returning continually" (lit.). In the Toroweap and Kaibab he will have been required to think of the instability of the sea bottoms as the Lord deepened these by crustal movements to receive the vast reservoir of waters which had been added to earth's surface in the great judgment of mankind.

FOURTH AND FIFTH BIBLICAL GEOLOGICAL CATASTROPHES

Perhaps the most difficult mental step required of the creationist at the Grand Canyon does not even relate to the great deposition series which have built the formations below his feet. He must also recognize through study of the terrain to the northeast and east that upwards of 2,000 feet of mesozoic, post-flood wind blown sands once covered the rim where he stands. These remain east of the canyon in the Echo Cliffs and Vermillion Cliffs. They also cover the Kaibab Formation at Lake Powell farther upriver. The creationist must remember that the deposition and the erosion of the Grand Canyon are two entirely separate events, separated by five or more generations. These years that have passed after the flood have brought about the abrupt and violent separation of our continent from Europe and Africa according to the testimony of Genesis 10:25 and the record of the rocks. It was this movement which elevated the area a mile and a half above sea level and trapped the great lake that filled Kapaiowitz Basin, the agent which carved the canyon. The testimony of harmony between these two records continues with remarkable coincidence for mere chance!

The fourth Biblical geological catastrophe is the name given to the event which caused the elevation of the area and the division of the continents in the days of Peleg. That the sea was involved in this division is massively suggested by a study of the root PLG in several languages (8). This great, thoroughly Biblical, geological event also triggered the fifth geological catastrophe, the icy catastrophe, by filling the atmosphere with dust, pumice and vast quantities of steam, changing the reflectivity of the earth and plunging it into an icy period. Life in Palestine during that catastrophe is thoroughly documented in the Book of Job (9). I have discussed physical evidences of these elsewhere (10).

SUMMARY

What have we found in our brief walk through time? I have tried to share with you in far too brief a time a harmonizational model in which I personally have recognized more than one hundred explicit, chronologically correct points of contact between the two histories of earth's early ages. I have not enumerated more than a few of these points of contact for time's sake. What would be the odds that two independent, unrelated accounts of the order of events of earth's early ages could arise in this way and get even ten events in the same order without there being a real connection between the two account series? The odds are 1 to 3,600,000. What if the two event series contained 100 events in the same order? Well, my calculator is not built to handle such odds, but I would bank on the fact that the two accounts are both presenting the same story! That story, whether studied in the Holy Scriptures or in the record of the rocks, relates the catastrophic event series of the first two to three millennia of earth's amazing history as it came from the hand of the Lord. It is my conclusion that the testimony of the heavens and the earth is in complete agreement with the testimony of God's Word on earth's early events. Obviously, man's presuppositions, whether creationist or uniformitarian, can get in the way of our appreciation of the fact.

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Gen. 1:1 CREATION OF HEAVENS AND EARTH	Gen. 1:2 PREADAMIC UNIVERSAL FLOOD & DARKNESS	Gen. 1:3-31 SIX LITERAL SOLAR DAYS	Gen. 2-6 ADAM TO NOAH	Gen. 7-9 UNIVERSAL NOAHIC FLOOD	Gen. 10-11 ABEL, DIVISION OF CONTINENTS	Gen. 12-now. UPLIFT OF WORLDS MOUNTAIN
	NO FOSSILS	UPLIFT OF CONTINENT	SIN GEOLOGICAL	MARINE, THEN SHORELINE, LAND PLANTS ANIMALS	TIME OF GREAT REPTILE BURIAL, UPLIFTS	MAMMAL AND THE ANGIOSPERM PLANTS DOMINATE
	ARCHAEOZOIC "ERA"	PROTEROZOIC "ERA"		PALEOZOIC "ERA"	MESOZOIC "ERA"	CENOZOIC "ERA" ICE AGE...

B.E. HORTHRUP

DISCUSSION

Dr. Northrup's paper is generally well thought out and nicely structured. However I offer the following comments:

- 1) Certain of the upper Paleozoic dune deposits (such as the Coconino Sandstone) give evidence of submarine deposition, not aeolian.
- 2) Fossil and sedimentary structure remnants in the Vishnu Schist are highly questionable. These rocks in the inner Gorge may have simply been isolated and later metamorphosed.
- 3) "Hints of marine plant life" are found in the pre-Cambrian sedi-pollen spores.
- 4) Ps. 104 seems to best fit the Flood, not the Creation (vs. 9 etc.)
- 5) The Garden of Eden was not in Mesopotamia. Underlying the area is thousands of feet of flood-lain over strata.
- 6) The "great deep" may not refer solely to oceans (i.e., "the deep"), rather to a much deeper source.
- 7) Population estimates based on Genesis 5 indicated that the human population (and presumably mammal population) was quite large at the time of the Flood.
- 8) Erosion of the Grand Canyon may have been by retreating Flood waters.

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CLOSURE

I have appreciated being able to have an active geologist evaluate my paper and offer criticisms. This is an extremely important contribution which we can make to each others' struggles to obtain a working model which could explain the physical, geological data from the field by means of the biblical record as well as to trace the record of the biblical events in the physical, geological record. I do not consider them to be unreconcilable, opposing and contradictory enemies but correlary testimonies, seeking better to understand the "genesis of geology" in the revelation of the Creator.

1.) The upper Paleozoic dune structures of the Coconino Sandstone contain both aeolian and marine intrusive evidences. Countless times the wind driven and deposited dune materials which contain multitudes of reptile and amphibian tracks preserve them on the surfaces which have been swept by waves. The dune materials preserve slopes which clearly have been deposited on inclines approaching 40 to 45 degrees. A study of submarine dunes will indicate that 20 to 22 degrees is the maximum inclination which will survive without extensive slumping. These are not dunes formed in a submarine environment. The tracks are made on the damp sands near the shoreline. They appear to have been rapidly covered by drier, blowing sands which form the overlying dune material. Repetition of the marine intrusion lops off the top of the newly formed dune leaving a plainly formed marine surface on which subsequent tracks were placed, with the cycle being repeated many, many times. This windy environment with a retreating shoreline is precisely that described in Genesis 8:1-3.

2.) The Vishnu Schist in the bottom of the Grand Canyon once was thought to contain very extensive reworked volcanic materials. These were given the name "Brahma Schist." Studies in the chemical contents of these Archaeozoic materials have made it necessary to set aside this interpretation. It is most common to consider the Vishnu Schist to be sedimentary deposits which have been distorted gravely through plastic flow or through complete refoliation, in contorted waves and often in vertical orientation. There are absolutely no evidences of fossils in the Vishnu Schist which is reckoned to be Archaeozoic, or early PreCambrian in age. This is in harmony with my conclusion that it is the deposit of the fountains of the deep which issued from the crust of the earth when the Lord completely covered the newly formed earth with the sea (Job 38:4-9).

3.) Dr. Morris apparently objects to the possibility that hints of marine plant life and possible land plant pollen forms are found in the Proterozoic or late Pre-Cambrian deposits. Since my model considers the Proterozoic deposits to be the great hydraulic deposits that would have been left by the abrupt erection of the continent in the third solar day of the creation week, I expect to find plant forms here. Genesis reveals that at least land

plants were created on that third day. I conclude that marine plants were also created then since they would play such a large part in the lives of the sea creatures which are created on the fifth day. I am confident, on the basis of Psalm 104:10-18 that the draining of that abruptly elevated continental land mass continued for an extended period of time. For this reason I have no difficulty with the conclusions of other geologists who find strong evidences of plant fossils like stromatolites, nodules which look suspiciously like spores and other indications of life forms in these upper Pre-Cambrian layers. The observation of giant stromatolites in Glacier National Park in layers which otherwise appear to be upper PreCambrian is in accord with my model of harmonization.

4.) Morris has difficulty recognizing Psalm 104 as a creation Psalm, as do many creationists. The problem arises entirely from one's interpretation of verse 9 as a command that earth never again will be covered by flood waters. The text is not that explicit. It, like Job 38:10-11, simply is a command establishing a divine mandate concerning sea level. It is worthwhile noting that in Job the order of events parallels that of the Psalm. This includes the laying of the foundations of the earth and the breaking forth of the sea from within the earth to cover its surface in the first universal flood (as detailed in Genesis 1:2-8 and Psalm 104:5-6). The coincidental swathing of the earth's surface by thick clouds before the forming of the canopy is not discussed in the Psalm but the Lord's command and His work of establishing of sea level with the accompanying orogenies are specifically stated.

At your rebuke they fled; at the voice of your thunder they hastened away. The mountains went up; the valleys went down unto the place which you had founded for them. You set a bound that they should not pass over (it), that they should not return to cover the earth (Psa. 104:7-9 lit.).

Verse 9 is the major factor in Psalm 104 which would cause a creationist ever to identify the Psalm as a Noahic flood Psalm. There is absolutely no hint that the covering of the land mass by universal waters in this Psalm was done in judgment as would be expected if the Psalm displayed the honor and majesty (v. 1) of the Lord through the destruction of sinful humanity. Rather the Psalm sees the greatness, the honor and majesty of the Lord displayed in a series of events which consecutively are for the most part examined in a series of par-ticipial clauses. These are the Lord's work of:

1. Stretching out the heavens like a curtain (v. 2)
2. Laying the beams of His chambers in the waters, making the clouds His chariot, walking upon the wings of the wind (v. 3)
3. Making His angelic ministers (v. 4)
4. Laying the foundations of the earth (v.5)
5. Covering the earth with the deep so that the mountains were covered completely (v. 6)
6. Establishing sea level by major crustal readjustment producing mountains and ocean valleys (vvs. 7-9)
7. Draining the erected continental mass by springs and streams while planting vegetation where the birds, animals and man would flourish (when created) (vvs. 10-18)
8. Appointing the movements of the sun and moon to govern day, season, month and year in preparation for the regulation of the activities of man and the animals (vvs. 19-23)
9. Displaying the multitude of the Lord's works and His wisdom in all of His creation, including the vastness of the sea and its multitudes of creatures which He maintains (vvs. 24-31)
10. Finally, turning to the future, the Psalmist is assured of the praise-worthiness of His Lord whose glory will endure forever over all His works, even including the wicked (vvs. 32-35). Psalm 104 is a creation Psalm or we have destroyed the cause for the exultation of the Psalmist which elicits this great hymn of praise and blessing.

5.) I find Morris incomprehensible in his objection that Eden was not in Mesopotamia. While I have examined the works of those who would prefer to place the origin of man on the continent of Africa, this is impossible in the light of Genesis 2. Of the four rivers which combine and flow from their heads down through the garden, two are positively identifiable. The Hiddekel which flows east of Assyria (Gen. 2:14) can only be the Tigris River. The Euphrates still maintains its original name (v. 14). It flows on the western boundary of the territory generally given the graphic name of Mesopotamia (middle of the rivers). Certainly, the Mesopotamian basin is overlain with thousands of feet of Noahic flood debris, for that event post-dates Adam's residence in the garden by at least 1,500 years.

6.) It is true that the term, tehom, "the great deep," does not always refer to the abyssal ocean. However, approximately 19 times of the 36 occurrences found in the Old Testament, it does. Moreover, the term often is used in forming the term "the fountains of the great deep." These great subterranean streams which broke forth from within the earth in causing the two universal floods (Gen. 1:2-8 with Job 38:8-9; Genesis 7:11-8:14) regularly are associated with the "deep." For that reason the term may be found referring only to springs (Deut. 8:7; 33:13; Psa. 77:17[16]; Job 28:14). The extension of the great sea to the northeast of Egypt, where the Egyptian army was destroyed after Israel had crossed on dry and, also is called tehom (Exo. 15:5,8; Hab. 3:10). It is not surprising to find that the concrete meaning of the term normally has reference to the oceans of the earth, with mere metaphorical applications of the term being extended elsewhere. This is normal grammar. In any case, context clearly requires tehom in Genesis 1:2 and in Psalm 104:6 to refer to the ocean.

7.) When we discuss population estimates before the Noahic flood, we always must include some presuppositions concerning the marriagable age of maturity, the length of the gestation period, the length of time that an infant was cared for by the mother before conception would occur again and the number of offspring that a mother could produce. This type of leap in logic is the very area where we collide with the uniformitarian as we examine his conclusions on geological time. A clue that gives warning against extravagant calculations of populations before the Noahic flood is found in the revelation that the birth of Seth, who replaced Abel in the Messianic line, did not take place until Adam's one hundred and thirtieth year. We know of only two other children which relate to the period. It is clear that Cain's wife was born well before his expulsion from the family. Most probably Seth's wife is one of the daughters which were born to Adam after Seth's birth (Gen. 5:4). This does not suggest rapid multiplication. Furthermore, the specific ages of Adam's offspring at the time of their firstborn also argues against rapid multiplication. The unlikely possibility that the Septuagint's statements on their ages is correct would extend this factor even more. For example, it gives Seth's age at the birth of Enos as 205 years rather than 105 years, usually adding 100 years to each span of maturation. Several factors here suggest to me the possibility that, under the canopy, there may also be a retardation of multiplication present among the other mammals as well.

8.) Many creationists have sought to avoid the uniformitarianist macrochronological pronouncements on the erosion of the Grand Canyon by suggesting that the flood's retreat rapidly performed this work. Such conclusions may seem to be a safe retreat at first glance. We do well to remember the safe retreat of the gap theory as an attempt to explain geological history. While I am thankful for the gap theory in that it temporarily provided me a mental bulwark against evolutionary chronology, I eventually found it to be an unworkable harmonization model. A thoughtful examination of the Grand Canyon will require similar rejection of an inadequate explanation of the phenomena found there. To touch a few of these, one must examine the induration factors required, well before its erosion, to account for the rock fractures and shear zones which the racing waters followed in carving this canyon. This was not cut a mile deep in Noahic flood ocean bottom deposits, either in the immediate retreat of the flood or even some few years later. This material was solid rock, not muds. The sheer bluffs of rocks which protected softer slopes like the Hermit Shale had been cemented without any exposure to the atmosphere. Not only is some time required here; the recognition of the elevation of the Coconino and Kaibab uplifts well above sea level during post-Noahic flood Mesozoic times also is required. The forces which produced our great western mountains through western migration well after the flood must be fitted in between deposit and erosion. After all, these great upheavals of mountain blocks uplift Paleozoic Noahic flood materials and Mesozoic wind dune and tidal wave retreat of flood materials, rending, tilting and shattering them by their uplift.

By trying to compress everything into the Noahic flood, one jams too many eggs into the one basket. One ignores the chronology required to allow for the vast glaciation of these uplifted mountains in their higher elevations, the entrapment of their melt waters in the great basins of the west, the beaches left by those entrapped melt waters and the canyons

carved as these basins continued to be raised throughout Cenozoic time until their drainage was possible. There are hundreds of thousands of square miles of evidences across the west which must be laid aside in accepting to simplistic an explanation of the rapid carving of the Grand Canyon. The presence of dinosaur tracks in the oxide stained Triassic overlays, which cap the upper rim Kaibab Limestones to the east of the canyon tell of the passing of some centuries before the erosive "ice age" post Noahic flood waters stripped much of the Kapaiowitz basin east of the Grand Canyon down to the Kaibab surface. The great Mesozoic layers which were not stripped away by these waters in the Echo Cliffs, in the Vermillion Cliffs and on up river in the area of Glen Canyon, testify to the passing of time before the erosion. The very few remaining evidences of post Noahic wind and tidal wave deposits remaining on the Coconino and Kaibab uplift through which the Grand Canyon is cut, also cry out for the passage of time between the deposition of the Grand Canyon and the erosion of the Grand Canyon. I believe that this time is found in Genesis 9-11 within the framework of Biblical time. But I also am aware that only as creationists return to the field to study the physical phenomena themselves will the real scope of events involved in the erosion of the Grand Canyon be generally understood.

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