

**Rightly “Dividing” the Word about Peleg:** Was Earth’s unusual “division” in Peleg’s lifetime a linguistic event or a geological event?

by

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נפרדו ... נפלגה ... נפרדו

“By these **were** the isles of the Gentiles **divided** (נפרדו) in their lands; every one after his tongue, after their families, in their nations.”

Genesis 10:5

“And unto Eber were born two sons: the name of one was Peleg; for in his days **was** the earth **divided** (נפלגה); and his brother's name was Joktan.”

Genesis 10:25

“These are the families of the sons of Noah, after their generations, in their nations: and by these **were** the nations **divided** (נפרדו) in the earth after the flood.”

Genesis 10:32

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<sup>1</sup> Dr. Morris authored this paper’s Part II, looking at geological issues related to Genesis 10:25.

<sup>2</sup> Dr. Johnson authored this paper’s Part I, looking at philological aspects of Genesis 10:25.

## I. INTRODUCTORY STATEMENT OF THE QUESTION

Is the “division” of languages, noted in both **Genesis 10:5** and **Genesis 10:32**, the same as the “division” of the earth, noted in **Genesis 10:25**, for which Peleg was named? (And, if not, then what is the difference between those two “divisions”?)

If the “division” Peleg was named for was a *linguistic* event, namely the miracle of languages that God injected at the Tower of Babel, Peleg’s genealogical position provides us with a chronological context clue about *when* Babel occurred. Because recent analysis has clarified the chronological relevance of Genesis genealogy data,<sup>3</sup> a linguistic “division” interpretation would sharpen the focus of Biblical history’s timeframe for the post-Flood demographic migrations following the Tower of Babel miracle.

However, if the “division” Peleg was named for was a *geologic* event (such as a **geographic** barriers-produced “division” of the Earth’s continental land-masses, due to rising water levels following the post-Flood **Ice Age**), the geologic (i.e., geography-altering) “division” interpretation would sharpen the focus of creation science’s understanding of post-Flood geologic history, with serious ramifications for interpreting the geologic record from a young-earth perspective.

Either interpretation provides insights for, and invites future research about, the global history-shaping events on Earth that occurred shortly “after the Flood”.

Proper philological study focuses on the Hebrew verbs translated “divided” in **Genesis 10:5**, **10:25**, and **10:32**, with extra insights from the Greek equivalents used in the Septuagint translation of Genesis. Philological analysis supports the conclusion that Peleg was named for something that occurred after the worldwide Flood, of a **geological** nature, that had global *geographical* significance.

Lastly, alternative explanations of what that could have been (geologically speaking) are identified and analyzed, from a young-earth creationist perspective.

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<sup>3</sup> See James J. S. Johnson, “How Young Is the earth? Applying Simple Math to Data Provided in Genesis”, **ACTS & FACTS**, 37(10):4 (October 2008), at pages 4-5, now posted at [www.icr.org/article/4124](http://www.icr.org/article/4124), citing a more comprehensive prior study, Thomas D. Ice & James J. S. Johnson, “Using Scriptural Data to Calculate a Range-Qualified Chronology from Adam to Abraham, with Comments on Why the ‘Open’-or-‘Closed’ Genealogy Question is Irrelevant”, originally presented at The Criswell College, unto the Evangelical Theological Society, March 1<sup>st</sup>, AD2002 (Southwest Regional Meeting), now posted at [www.icr.org/adam-abraham-chronology](http://www.icr.org/adam-abraham-chronology). Both of these studies are heavily indebted to Bill Cooper’s benchmark work, *After the Flood: The Early Post-Flood History of Europe Traced Back to Noah* (Chichester, West Sussex, England: New Wine Press, 1995), 256 pages, now posted at <http://ldolphin.org/cooper/contents.html>.

The question this paper focuses on has been previously addressed by the founder of Biblical creation revival movement, **Dr. Henry M. Morris**, as follows:

Peleg -- or rather, the event associated with his name -- is of more interest [than his brother Joktan] today. "In his days was the earth divided." Evidently this was a most memorable event, and Eber named his son in commemoration of it. The name "Peleg" means "division."

\* \* \* \* \*

The big question concerns the meaning of the indicated division of the earth. The most obvious interpretation of this verse is that the division was the division of the peoples at the Tower of Babel, as discussed in Genesis 11. It is significant that some such division is mentioned here in Genesis 10:5 ("By these were the isles of the Gentiles divided in their lands; every one after his tongue, after their families, in their nations") and Genesis 10:32 (" . . . by these were the nations divided in the earth after the flood."). These [other two] verses seem clearly to refer to a linguistic and geographic division [i.e., a language-driven demographic separation], rather than to an actual splitting of the continents. This is especially clear in verse 5, where the division is specifically "after his *tongue*."

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**It is true that the word used for "divided" (Hebrew *palag*) in the verse associated with Peleg (10:25) is different from the word for "divided" (Hebrew *parad*) in verses 5 and 32, and this may possibly mean that two different types of division are in view. [emphasis added]**

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If it is ever actually proved that the earth once was a single land mass that somehow split apart, with the segments gradually drifting away to form the present continents, then indeed this verse might be understood to refer to such an event. At present, the question of continental drift is still open among scientists; and creationist scientists have pointed to a number of unresolved physical difficulties with the whole idea. In any case, it is not at all necessary to postulate continental drifting in order to account for the populations now found in remote parts of the globe. Migrations undoubtedly took place across the former land bridges at the Bering Strait and the Malaysian Strait, when the sea level was much lower than it is now, during the centuries following the Flood when much of the earth's water was frozen in the great continental ice sheets of the Glacial Epoch. Furthermore, early [post-deluvian] man knew how to construct seagoing vessels (their ancestors had, after all, constructed the Ark!) and could easily have traveled from continent to continent by water, as much evidence from antiquity in fact indicates he did. It is just possible, however, that the great store of energy

beneath the earth's crust, much of which was released when the "fountains of the great deep" were "broken up" at the time of the Flood, provided the tremendous force needed to move continents apart, and that a further release of this energy took place in connection with the Tower of Babel.

Quoting Henry M. Morris, The Genesis Record, A Scientific and Devotional Commentary on the Book of Beginnings (Grand Rapids: Baker, 1991), pages 260-261.

So, recognizing that God directed Moses to employ two different Hebrew verbs, **palag** and **parad**, does that difference really make a difference? Or, are these two verbs merely synonyms used to concur in describing the same *linguistic-turned-demographic* history? Or, to restate the question, does the difference between these two Hebrew verbs demonstrate an authorial intent to describe two different episodes in post-Flood history?

To investigate this puzzle, with the help of Old Testament Hebrew philology, a review of the two Hebrew verbs (and their etymological kin) is in order.

## II. "DIVIDED" IN GENESIS 10:25

### A. The Hebrew verb PALAG.

What is the meaning of "divided" as that word appears in **Genesis 10:25**? The basic root verb is פָּלַג (transliterated as *palag*). Some form of the Hebrew verb *palag* appears in the Old Testament, in 4 instances,<sup>4</sup> as follows:

<b>Genesis 10:25</b>	( <i>niphal</i> perfect: "was divided")
<b>1<sup>st</sup> Chronicles 1:19</b>	( <i>niphal</i> perfect: "was divided")
<b>Job 38:25</b>	( <i>piél</i> perfect: "hath divided")
Psalms 55:9(10)	( <i>piél</i> imperative: "divide [!] ")

Of special importance, **1<sup>st</sup> Chronicles 1:19** uses the same Hebrew verb, *palag*, to describe whatever it was that occurred during Peleg's lifetime, i.e., whatever it was that Peleg was named for. The text of **1<sup>st</sup> Chronicles 1:19** says:

And unto Eber were born two sons: the name of the one was Peleg; because in his days the earth **was divided** [ פָּלַגְתָּהּ ]: and his brother's name was Joktan.

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<sup>4</sup> George V. Wigram, The Englishmen's Concordance of the Old Testament (London: Samuel Bagster & Sons, 3<sup>rd</sup> ed., 1874, reprinted by Hendrickson, 2001), page 1019, column 1.

This is the same, verbatim, as the text of Genesis 10:25. The subject of the *palag* verb is “the earth” ( *ha’arets* ), which is feminine. The “division” which occurred in Peleg’s lifetime was a division that was imposed upon the earth, i.e., the earth was the **passive** recipient to the action of “dividing” that occurred.

### B. The Hebrew nouns *PELEG*, *PELAGGAH*, & *PELÛGGAH*.

The masculine noun derived from *palag*, which has the same consonantal spelling as the verb *palag* (but is represented with different vowel pointing, to show the different pronunciation), is *peleg* ( פֶּלֶג ), which appears 10 times<sup>5</sup> in the Old Testament, and is routinely translated as “river”:

Job 29:6	(masculine plural noun construct: “rivers of”)
Psalms 1:3	(masculine plural noun construct: “rivers of”)
Psalms 46:4(5)	(masculine plural noun w/ masc. suffix: “streams thereof”)
Psalms 65:9(10)	(masculine singular noun construct: “river”)
Psalms 119:136	(masculine plural noun construct: “rivers of”)
Proverbs 5:16	(masculine plural noun construct: “rivers of”)
Proverbs 21:1	(masculine plural noun construct: “rivers of”)
Isaiah 30:25	(masculine plural noun absolute: “rivers”)
Isaiah 32:2	(masculine plural noun construct: “rivers of”)
Lamentations 3:48	(masculine plural noun construct: “rivers of”)

The feminine nouns derived from *palag*, which has the same consonantal spelling as the verb *palag*, plus a soft “h”, are *pelaggah* and *pelûggah* ( both spelled consonantly as פֶּלְגָה ), which Hebrew nouns in aggregate appears 4 times<sup>6</sup> in the Old Testament, and are routinely translated either as “division” or “river”:

Judges 5:15	(feminine plural noun construct: “divisions of”)
Judges 5:16	(feminine plural noun construct: “divisions of”)
Job 20:17	(feminine plural noun absolute: “rivers”)
2 <sup>nd</sup> Chronicles 35:5	(feminine plural noun construct: “divisions of”)

<sup>5</sup> George V. Wigram, The Englishmen’s Concordance of the Old Testament (London: Samuel Bagster & Sons, 3<sup>rd</sup> ed., 1874, reprinted by Hendrickson, 2001), page 1019, column 1.

<sup>6</sup> George V. Wigram, The Englishmen’s Concordance of the Old Testament (London: Samuel Bagster & Sons, 3<sup>rd</sup> ed., 1874, reprinted by Hendrickson, 2001), page 1019, column 1.

### C. Aramaic counterparts to PALAG & PELEG.

Also, of etymological relevance, derivatives of the related Aramaic verb *pelag* appears in the Old Testament, in 2 instances<sup>7</sup>), namely:

Daniel 2:41            (*peal* passive feminine singular participle: “divided”)  
Daniel 7:25            (*peal* participle: a “dividing”)

The Aramaic feminine noun derived from the Aramaic verb *pelag*, which has the same consonantal spelling as the verb, plus a soft “h”, is ( פִּלְגָה ), which appear once<sup>8</sup> (in the **Ezra 6:18**), and is translated there as “divisions”.

### D. Initial Observation: PELEG usually means “river”.

One immediate observation, from the above philological investigation, is apparent: *peleg*, the masculine noun derived the root verb *palag*, basically means “river”. Thus, the most basic idea of *palag* and *peleg* is that of a “river”. And, land that is “divided” by such a watercourse could be called “riven”, just as a “creek” flows through a “crack” in the land.

Also, as this paper will later emphasize, the concept of a *peleg* (“river”) is not limited to artificial watercourses, such as drainage ditches or irrigation canals, because **Job 38:25-27** refers to how God provides for the rain-driven hydrology of the wilderness, by “dividing” a channel for the water to flow through, in order to provide needed water for wilderness vegetation.

Who hath **divided** [*pilêg*] a watercourse [*te’alah*] for the overflowing of waters, or a way for the lightning of thunder, to cause it to rain on the earth, where no man is; on the wilderness, wherein there is no man, to satisfy the desolate and waste ground; and to cause the bud of the tender herb [*i.e., vegetation sproutings*] to spring forth?

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<sup>7</sup> In KJV’s rendering of **Daniel 2:41**, this Aramaic participial verb is translated “shall be divided”, yet (because it is a passive participle verb form, not an imperfect verb form) it could be more literally translated as “is being divided”, with Daniel describing the future as if Daniel were somehow “present” in that timeframe, observing (and thus able to describe) the political “division” process of that 4<sup>th</sup> empire’s breakdown.

<sup>8</sup> George V. Wigram, The Englishmen’s Concordance of the Old Testament (London: Samuel Bagster & Sons, 3<sup>rd</sup> ed., 1874, reprinted by Hendrickson, 2001), page 1043, column 2, to page 1044, column 1.

In other words, *palag* is a Hebrew verb that is used to describe the formation of river-flow drainage systems in the earth, including “wild” and “desolate” places (as noted in **Job 38:25-27**) where no humans live!

### III. “DIVIDED” IN GENESIS 10:5 AND IN GENESIS 10:32

What is the meaning of “divided” as that word appears in both **Genesis 10:5** and in **Genesis 10:32**? The basic root verb is פָּרַד (transliterated as *parad*). Some form of the verb *parad* appears in the Old Testament, in 26 instances,<sup>9</sup> as follows:

Genesis 2:10	( <i>niphal</i> imperfect singular: “was parted”)
<b>Genesis 10:5</b>	( <i>niphal</i> perfect plural: “were divided”)
<b>Genesis 10:32</b>	( <i>niphal</i> perfect plural: “were divided”)
Genesis 13:9	( <i>niphal</i> imperative: “separate thyself”)
Genesis 13:11	( <i>niphal</i> imperfect plural, with ׀: “separated themselves”)
Genesis 13:14	( <i>niphal</i> infinitive singular: “was separated”)
Genesis 25:23	( <i>niphal</i> imperfect: “shall be separated”)
Genesis 30:40	( <i>hiphil</i> perfect singular: “did separate”)
<b>Deuteronomy 32:8</b>	( <i>hiphil</i> infinitive singular: “when He separated”)
Judges 4:11	( <i>niphal</i> participle singular: “had separated himself”)
Ruth 1:17	( <i>hiphil</i> imperfect: “part”)
2 <sup>nd</sup> Samuel 1:23	( <i>niphal</i> perfect plural: “were divided”)
2 <sup>nd</sup> Kings 2:11	( <i>hiphil</i> imperfect, with ׀: “and parted”)
Nehemiah 4:19(13)	( <i>niphal</i> participle plural: “are separated”)
Esther 3:8	( <i>pual</i> participle, with ׀: “and dispersed”)
Job 4:11	( <i>hithpaél</i> imperfect plural: “are scattered abroad”)
Job 41:17(9)	( <i>hithpaél</i> imperfect plural: “be sundered”)
Psalms 22:14(15)	( <i>hithpaél</i> perfect, with ׀: “and are out of joint” / “sundered”)
Psalms 92:9(10)	( <i>hithpaél</i> imperfect plural: “shall be scattered”)
Proverbs 16:28	( <i>hiphil</i> participle: “separateth”)
Proverbs 17:9	( <i>hiphil</i> participle: “separateth”)
Proverbs 18:1	( <i>niphal</i> participle singular: “having separated himself”)
Proverbs 18:18	( <i>hiphil</i> imperfect: “parteth”)
Proverbs 19:4	( <i>niphal</i> imperfect: “is separated”)
Ezekiel 1:1	( <i>qal</i> [“paül”] participle: “were stretched”)
Hosea 4:14	( <i>piél</i> imperfect plural: “are separated”)

<sup>9</sup> George V. Wigram, The Englishmen’s Concordance of the Old Testament (London: Samuel Bagster & Sons, 3<sup>rd</sup> ed., 1874, reprinted by Hendrickson, 2001), page 1019, column 1.

Of these instances of the verb *parad*, the one that requires immediate attention is **Deuteronomy 32:8**, because it describes the same “division” (or “separation”) of mankind that is denoted in **Genesis 10:5** and **10:32**, i.e., the division of the human race, demographically speaking, as a consequence of the linguistic fragmentation of people due to God’s reaction to the Tower of Babel’s humanistic rebellion (under Nimrod). The text of Deuteronomy 32:8 says:

When the Most High divided [literally “in the Most High’s having caused to have inheritance”] to the nations [*goyim*] their inheritance, **when He separated** [ בהפרידו ] the sons of Adam, He set the bounds of the people [*ammim*, literally “peoples”] according to the number of the children of Israel.

The form of *parad* in Deuteronomy 32:8 begins with a context-indicating prepositional prefix ( כ ), followed by a *hiphil* (active causative) infinitive form of *parad*, followed by a 3<sup>rd</sup> person singular masculine pronoun suffix (meaning “of him”, i.e., of Adam, whose “sons” represent him in human history). Of special importance, the information in the verse indicates that God separated mankind into “nations” (*goyim*), who are also called “peoples” (*ammim*), with the established demographics of that new set of anthropological subdivisions to be somehow linked to the “number” of the “sons” (*benê* -- i.e., direct descendants) of Israel. This demographic “division” of mankind appears to be the same demographic division noted in Genesis 10:5 and 10:32.

In Deuteronomy 32:8, Moses describes the divine action from the perspective of its **cause**, God’s action, because God **actively** “caused” (using a *hiphil* verb form) division to be imposed upon the descendants of Adam.

However, in Genesis 10:5 and 10:32, Moses describes God’s action using *niphal* perfect verbs, emphasizing the **passive** role of the people-groups who became “divided” by language barriers, thus highlighting the received **effect** of God’s action upon all of those people-groups who are indicated in that part of Genesis chapter 10’s “Table of Nations”.

Several other observations, relevant to understanding how *parad* is used in Genesis 10:5 and 10:32, are noteworthy:

#### **IV. INSIGHTS FROM THE GREEK SEPTUAGINT**

The Septuagint (a/k/a “LXX”) is a complete translation of the Old Testament, in ancient Greek, that was completed before the Lord Jesus came to Earth.<sup>10</sup>

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<sup>10</sup> “The Septuagint (from the Latin *septuaginta*, meaning “seventy”, and frequently referred to by the roman numerals LXX) is the Greek translation of the Old Testament.

So what help could a Greek translation be, toward understanding what parts of the Hebrew Bible say?

“What Good is the Septuagint, for Understanding the Bible?”<sup>11</sup> (*attached as an appendix*) shows that the Septuagint can provide non-authoritative insights into how some ancient Jewish scholars, living in the intertestamental era (i.e., the timeframe after the Old Testament canon was completed, yet before the New Testament era began with the 1<sup>st</sup> coming of Christ), understood their Old Testament, -- by virtue of how those ancient Jewish scholars chose to translate the Old Testament’s original Hebrew text into the Greek language that once dominated northern Egypt.

The Septuagint’s Greek verbs, used to translate “divided” in Genesis 10:5, 10:25, and 10:32, are as follows:

<b>Genesis 10:5</b>	Hebrew: נִפְרְדוּ <i>niphredû</i> <sup>12</sup>	LXX Greek: ἀφορίσθησαν <i>aphôristhêsan</i> <sup>13</sup>
<b>Genesis 10:25</b>	Hebrew: נִפְלְגָה <i>niphlegah</i> <sup>14</sup>	LXX Greek: διμερίσθη <i>diemeristhê</i> <sup>15</sup>

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The name derives from the tradition that it was made by seventy (or seventy-two) Jewish scholars at Alexandria, Egypt during the reign of Ptolemy Philadelphius (285-247 B.C.).” *Quoting* Henrickson’s Preface to Sir Lancelot Charles Lee Brenton’s The Septuagint with Apocrypha: Greek and English (Hendrickson Publishers 1999 reprint; orig. ed. published in London by Samuel Bagster & Sons, 1851).

<sup>11</sup> James J. Scofield Johnson, “What Good is the Septuagint, for Understanding the Bible?”, *Cross Timbers Institute, Short Paper # AD2009-03-20 (available on request)*.

<sup>12</sup> *Niphal* [i.e., simple passive] perfect 3<sup>rd</sup> person plural masculine form of the verb *parad*.

<sup>13</sup> 3<sup>rd</sup> person plural aorist indicative passive form of the verb *aphorizô*. In the KJV, the verb *aphorizô* is translated as a form of “divide” (1x), “separate” (8x), and “sever” (1x). See Robert Young, Young’s Analytical Concordance to the Bible (Hendrickson reprint, n.d.), “Index-Lexicon to the New Testament” at page 60, column 5; George V. Wigram, The Englishmen’s Greek Concordance of the New Testament (Hendrickson reprint, 1999), page 99, column 1.

<sup>14</sup> *Niphal* [i.e., simple passive] perfect 3<sup>rd</sup> person singular feminine form of the verb *palag*.

<sup>15</sup> 3<sup>rd</sup> person plural aorist indicative passive form of the verb *diamerizô*. In the KJV, the verb *diamerizô* is translated as a form of “divide” (5x), “part” (6x), and “cloven” (1x). See Robert Young, Young’s Analytical Concordance to the Bible (Hendrickson reprint, n.d.),

Genesis 10:32

Hebrew: נִפְרְדוּ  
*niphredû*<sup>16</sup>

LXX Greek: διεσπάρησαν  
*diesparêsan*<sup>17</sup>

Interestingly, the Greek verbs used to translate **Genesis 10:5** and **Genesis 10:32** are completely different Greek verbs, yet the underlying Hebrew verbs in both **Genesis 10:5** and **Genesis 10:32** not only involve the same Hebrew verb, they are exactly the same particular form of that Hebrew verb! Obviously, this difference in translator's selection of Greek words (to translate the same Hebrew word) illustrates the limited value (i.e., inherent weakness) that a translation provides to understanding the original it attempts to translate. Yet, even so, the Greek translation of **Genesis 10:25** provides the Greek reader with an understanding of how Septuagint-era bilingual Jewish scholars<sup>18</sup> historically interpreted the contextual meaning of those verbs in Genesis chapter 10.

## V. FURTHER CRITIQUE OF THE "TRADITIONAL" VIEW

The "linguistic explanation" is probably the most popular explanation given for the meaning of Genesis 10:25, as Dr. John D. Morris noted during 1993:

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"Index-Lexicon to the New Testament" at page 65, column 1; George V. Wigram, The Englishmen's Greek Concordance of the New Testament (Hendrickson reprint, 1999), page 146, column 2 – page 147, column 1.

<sup>16</sup> *Niphal* [i.e., simple passive] perfect 3<sup>rd</sup> person plural masculine form of *parad*.

<sup>17</sup> 3<sup>rd</sup> person plural aorist indicative passive form of the verb *diaspeirô*. In the KJV, the verb *diaspeirô* is translated as "scatter abroad" (3x). Consider our English phrase "Diaspora Jews"; consider also our English verb "disperse" and our English noun "spore". See Robert Young, Young's Analytical Concordance to the Bible (Hendrickson reprint, n.d.), "Index-Lexicon to the New Testament" at page 65, column 2; George V. Wigram, The Englishmen's Greek Concordance of the New Testament (Hendrickson reprint, 1999), page 148, column 1.

<sup>18</sup> The strength of LXX scholarship is that the "weakest" Hebrew scholar, who helped to translate the Old Testament from Hebrew (and Aramaic) into Alexandrian Greek, likely knew both Old Testament Hebrew (and Aramaic), as well as Alexandrian Greek, better than the "strongest" of today's Hebrew scholars. However, even with that being true, it is nonetheless an inherent weakness of the LXX scholarship, of course, that it was (ad is) an un-inspired translation of the Old Testament Hebrew (and Aramaic) text, with no "every-jot-and-tittle" guarantee that the translators were, individually, redeemed believers, much less theologically sound believers.

The traditional interpretation relates Peleg's day to the division of language/family groups at the Tower of Babel. Comparing the lineage of Shem, which includes Peleg, to the lineage of Ham, which includes Nimrod, leader of the rebellion at Babel, we find it likely that Peleg was born soon after the dispersion (assuming the genealogies are complete). Thus it would have been reasonable for his father Eber to name a son in commemoration of this miraculous event.<sup>19</sup>

Dr. David M. Fouts has more recently (i.e., in 1998) reminded us that the “linguistic explanation” is still the “traditional” view, within his very informative discussion of possible explanations of Genesis 10:25’s meaning:

***Division of tongues / genealogies.*** The traditional understanding of Gen[esis] 10:25 has been that the etiological notice appearing with Peleg’s name (“for in his days the earth was divided [*niplega*]”) is a literary foreshadowing of the division of languages in the account of the tower of Babel (chap. 11) and/or that it also may serve to demonstrate a division of Eber’s line into the ancestors of Abraham on the one hand and the builders of Babylon on the other. Those who support a traditional view include Keil and Delitzsch, Morris and Whitcomb, G. C. Aalders, H. C. Leupold, Allen Ross, John Sailhamer, Victor Hamilton, Richard T. White and Jewish sources.

Quoting page , from David M. Fouts, “Peleg in Gen[esis] 10:25”, ***Journal of the Evangelical Theological Society***, vol. 41, issue 1 (March 1998), pages 17-21, posted at [http://findarticles.com/p/articles/mi\\_qa3817/is\\_199803/ai\\_n8784385/](http://findarticles.com/p/articles/mi_qa3817/is_199803/ai_n8784385/) . (For example, Allen Ross promotes the “traditional” view via his Genesis commentary<sup>20</sup> within the Old Testament volume of the *Bible Knowledge Commentary*, a valuable work from present and former faculty of Dallas Theological Seminary).

One of the problems, however, -- at least for those who hold a commitment to an inerrantist “every-jot-and-tittle” Bibliology, -- is the difference between the Hebrew verbs used for the post-Babel language-driven demographic “division” of the earth by the new people-groups (as illustrated by Genesis 10:5 and 10:32), and the Hebrew verbs used to describe whatever happened “in the days” of Peleg (as illustrated by Genesis 10:25 and 1<sup>st</sup> Chronicles 1:19). To re-quote Dr. Fouts:

Since 10:5, 10:20 and 10:31 provide summaries of the lineages of Japheth, Ham and Shem that foreshadow the events of Genesis 11, with 10:5, 32 properly using *parad* for that separation, what then is the purpose of 10:25 with its particular use of both the nominal *peleg* and verbal *palag*? If it also refers to the

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<sup>19</sup> John D. Morris, “What Happened in the “Days of Peleg”?”, from ***ACTS & FACTS***, October 1993, posted at [www.icr.org/article/what-happened-days-peleg](http://www.icr.org/article/what-happened-days-peleg) .

<sup>20</sup> Allen Ross, “Genesis”, *Bible Knowledge Commentary: Old Testament* (Wheaton: Victor Books, 1985), p. 44.

division of languages in the time of Peleg, what purpose is served by its **redundant** insertion here?

Quoting page 21, from David M. Fouts, "Peleg in Gen[esis] 10:25", *Journal of the Evangelical Theological Society*, vol. 41, issue 1 (March 1998), pages 17-21, posted at [http://findarticles.com/p/articles/mi\\_qa3817/is\\_199803/ai\\_n8784385/](http://findarticles.com/p/articles/mi_qa3817/is_199803/ai_n8784385/).

## VI. REVIEW OF SOME "GEOLOGICAL EVENT" PERSPECTIVES

This paper is not alone in concluding that the "division" Peleg was named for was a **geological** (as opposed to a **linguistic**) matter.

However, the bulk of "geological explanation" proponents have offered "continental drift" as the geological explanation, which is a geological explanation the current co-authors are reluctant to adopt. But it does indicate, at the very least, that some analysts have been dissatisfied with a "linguistic explanation" for Peleg's naming:

**Continental drift.** Recently attempts have been made by certain young-earth creationists to see in Gen 10:25 a reference to the drift between the continents. Proponents include Donald Gray Barnhouse and Bernard Northrup. To argue in this manner involves concentrating on the basic meaning of the root *plg* and its derivations in other languages, particularly Greek.

The noun *peleg* occurs ten times in Scripture, and each time watercourses (canals, tears, etc.) or rivers are in view (Job 29:6; Pss 1:3; 46:5[6]; 65:9[10]; 119:136; Prov 5:16; 21:1; Isa 30:25; 32:2; Lam 3:48). The noun *pelagga* in Job 20:17 also refers to rivers. One might see in this usage a division of land by water.

Northrup traces the development of the root *plg* from its Semitic cognates to its derivations. He concludes that the emphasis in Greek refers to dividing land masses by larger bodies of water, such as seas or oceans. Therefore the reference in Gen 10:25 must be to the division of the earth by large bodies of water and as such must be a reference to continental drift.

Though one may certainly commend Northrup for his intriguing proposal, one must also question his reasoning with respect to how the usage of a given word in classical Greek can determine the usage of a similar word in Pentateuchal Hebrew—unless, of course, one accepts the documentary hypothesis. Even so, the traditionally understood dates for J (ca. 850 BC) and E (ca. 750) are probably still too early to be influenced by classical Greek (ca. 700-300). While one might argue successfully that the root *plg* in classical Greek may have derived from Semitic, one may not then impose the Greek gloss on the chronologically older basis for the alleged derivation. My colleague Gary Schnittjer says of Northrup's

reasoning that "only someone straining to prove a particular theological position would argue that way."

Northrup also argues that *'ereš* in Gen 10:25 must be understood as referring to the "earth" rather than a given "land." To be sure, *'ereš* means "earth" often in Genesis and elsewhere in Scripture. But the fact remains that it is most often used in the Pentateuch to refer to the land of promise as a specific geographical region. Otherwise context will aid in determining its usage, such as in Gen 10:10; 11:2 ("the land of Shinar").

One would also think that for such a dramatic event as continental drift to occur in the days of an individual would be as cataclysmic as Noah's flood and would warrant similar space in Scripture due to its earthshaking importance.

Quoting pages 19-20, from David M. Fouts, "Peleg in Gen[esis] 10:25", *Journal of the Evangelical Theological Society*, vol. 41, issue 1 (March 1998), pages 17-21, posted at [http://findarticles.com/p/articles/mi\\_qa3817/is\\_199803/ai\\_n8784385/](http://findarticles.com/p/articles/mi_qa3817/is_199803/ai_n8784385/).

Professor Fouts, like the present co-authors, is unpersuaded that the "continental drift" theory fits Peleg's historic naming. Fouts proposes another explanation, which he sponsors un-dogmatically, focusing on the watercourse-related contexts of Biblical verses that use a form of the Hebrew verb *palag*:

**Canalization.** A third view that may be developed here is that the notice of the division of the earth in the days of Peleg may instead be an incidental reference to the widespread canalization of the land of Mesopotamia. This view recognizes the semantic field of the word but limits its meaning to canals or smaller streams of water, following its primary usage in the OT. Furthermore it has cognates in both Akkadian (*palgu*) and Ugaritic (*plg*), both of which mean "canal." Though the idea came to me after studying the issues involved, it was published already by John Skinner and was more recently suggested as a possibility by Victor Hamilton.

Can *peleg* assume the meaning of "canal" or "watercourse"? There seem to be some OT contexts that would accept this rendering. Initially one thinks of Job 38:25, a creation context in which it is stated that God makes a watercourse for the flood, synonymously parallel to a way for the thunderbolt. Could this then be akin to a drainage ditch? Proverbs 21:1 refers to God turning the king's heart as one turns "channels" of water. How may water best be channeled if not by irrigation canals? In Deut 11:10 reference is made to watering gardens with the foot. The ancient Egyptians may have had foot pumps that were used in connection with irrigation canals. In Isa 32:2 *peleg* may refer to an irrigation ditch or canal in that normally dry places are watered by oases rather than naturally occurring living streams. 17 The meaning "canal" for Akkadian *palgu* and Ugaritic

*plg* both might argue for that meaning at least in some of the Hebrew occurrences.

In context the land of Genesis 10-11 seems to indicate the land of Shinar or Mesopotamia (10:10; 11:2) rather than the earth as a whole or Palestine in particular. Hence 'ereš here will either refer to humanity or to the land of Shinar itself with certain exceptions: In the summaries of 10:5, 20, 31 are proleptic references to "lands" that I think look forward to the obviously worldwide dispersion indicated in 11:8-9.18

Since 10:5, 10:20 and 10:31 provide summaries of the lineages of Japheth, Ham and Shem that foreshadow the events of Genesis 11, with 10:5, 32 properly using *parad* for that separation, what then is the purpose of 10:25 with its particular use of both the nominal *peleg* and verbal *palag*? If it also refers to the division of languages in the time of Peleg, what purpose is served by its redundant insertion here? Also, of what significance is the nominal idea of a watercourse within the name Peleg itself? The verse in question may seem instead to offer an incidental statement of the widespread development of the renowned canal system of Mesopotamia. Peleg was named such ("canal") because in his days the land was **divided by watercourses** ("canalized").

Quoting pages 20-21, from David M. Fouts, "Peleg in Gen[esis] 10:25", **Journal of the Evangelical Theological Society**, vol. 41, issue 1 (March 1998), pages 17-21, posted at [http://findarticles.com/p/articles/mi\\_qa3817/is\\_199803/ai\\_n8784385/](http://findarticles.com/p/articles/mi_qa3817/is_199803/ai_n8784385/) [emphasis added].

But would localized canalization be important enough, in God's writing the Bible through Moses, to be included in an otherwise straight-forward genealogy record? No.

The *manmade* canals of Mesopotamia, whatever the record therefor may be, may have impressed many humans during Biblical times, just as *manmade* pyramid-building would impress those who visit the pyramids of Egypt or of Mesoamerica.

But was God that impressed, to the point He would have chosen to have an allusion to such regional canalization to be inserted as an unusual detail appended to Peleg's listing in Genesis chapter 10's "Table of Nations"? Unlikely.

Recall that God chose not to record the names of the royal pharaohs of Egypt (whom many humans thought were very important). Yet God chose to record the names of the midwives (Shiphrah and Puah<sup>21</sup>) who resisted the infanticide decree of a pharaoh (whose name we still argue about, because God chose not to record it in Scripture). Many whom "the world" recognizes as "big people" are discounted as "little" by God, Who evaluates people by His own standards. Likewise, many whom "the world" deems as "little people" God has graciously chosen to recognize as being "great".

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<sup>21</sup> See Exodus 1:15.

Likewise, the Moabite Stone recalls the northern kingdom of Israel as “the Land of Omri”, but what do we learn of King Omri in Scripture? Very little. Omri is probably best known to Bible readers as the father of wicked King Ahab and the father-in-law to wicked Queen Jezebel, illustrating how the content of Scripture is unlikely to match what humans deem “important”.

However, as this paper will show later, the concept of “canalization” is very close to what this paper will ultimately suggest as the preferable explanation for *how* the earth “was divided”, historically, “in the days of Peleg”.

Meanwhile, “canalization” is not the only geological (or geographic) explanation, besides “continental drift” theory, available to explain what Genesis 10:25 alludes to. Dr. John D. Morris, in 1993, considered the following geology-oriented explanations, including his succinct analysis for why “continental drift” is **not** an attractive explanation:

There have been many treatments of the verse [i.e., Genesis 10:25]. One suggests that "divided" implies "surveyed" as in divided into [*cartographic*] grids. Could the early post-Flood inhabitants have explored and mapped the new earth, so radically different from the pre-Flood earth? There *are* ancient maps and traditions of far-away continents.

Another deals with the possibility of continental separation. Geologists have marshaled much evidence that the continents were once together.

But while continental separation is well supported, it is still unproven, and very likely unprovable. Many competing concepts have been proposed in the geologic literature, and serious difficulties remain, the weightiest of which is the lack of a sufficient mechanism to move the continents. In fact, the most viable concepts are coming from young-earth creationists, employing the overall Flood scenario as the mechanism and timing for the separation. At least the destruction of the earth's surface at the time of the Flood has the potential to move continents!

But any scheme of rapid separation would itself cause havoc on the earth. If the Atlantic Ocean opened up rapidly, the destructive tsunamis, earthquakes, and volcanoes would make life impossible on earth.

For this reason, I am convinced that **Genesis 10:25** should not be understood to imply that "In the days of Peleg the Atlantic Ocean opened up." This would have caused devastation comparable to Noah's Flood, and the Bible has no mention of it. If the continents separated, they did so *during* Noah's Flood.

\* \* \* \* \*

One "separator" did occur sometime after the dispersion. The Ice Age, which followed the Flood, would have caused sea level to be an estimated 600 feet lower than today, since such a great volume of water was trapped as ice on the continents. Such a lowering of today's seas would reconnect the continents once again. The connected continents would have aided in both animal and human migration following both the Flood and the dispersion, as commanded by God (Genesis 8:17; 11:4,8,9). Then the ending of the Ice Age and the melting of the ice sheets would cause sea level to rise, covering the land bridges and "dividing" the continents after migration had occurred.

Perhaps this is what happened "in the days of Peleg." <sup>22</sup>

More about post-Ice Age changes will follow. But first additional attention will be given to the critical importance of looking for catastrophist explanations.

## **VII. REVIEW OF SOME CATASTROPHIST GEOLOGY CONCEPTS**

### A. CATASTROPHES EXPLAIN MUCH OF THE EARTH'S LANDSCAPES

Earth history is dominated by catastrophist geology, including its river systems. This important clarification has been emphasized by creationist geo-scientists such as Dr. Steve Austin:

The most popular theories for the origin of the form of the earth's surface features suppose that they have been sculptured during vast time periods by erosive processes similar in rate, scale and intensity to modern processes. The theory that dominates modern geomorphology was formulated nearly a hundred years ago by William Morris Davis, a Harvard geologist. He supposed that landscapes did not develop haphazardly, but evolved through a series of stages as the stream drainage slowly eroded channels upslope and as valleys were progressively widened and deepened. According to Davis, the "youthful" stage of landscape evolution immediately follows uplift and is characterized by poor drainage, and narrow, **V**-shaped valleys between flat and wide interstream divides. After a few millions of years of erosion, the maximum relief "mature" stage would be achieved with well-integrated stream drainage, and deep, wide

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<sup>22</sup> John D. Morris, "What Happened in the "Days of Peleg"?", from **ACTS & FACTS**, October 1993, posted at [www.icr.org/article/what-happened-days-peleg](http://www.icr.org/article/what-happened-days-peleg) .

valleys, between narrow and rounded interstream divides. Finally, if erosion continued unchecked, the landscape could enter the "old age" stage where the surface becomes a poorly drained "peneplain" with streams of low gradient meandering over extensive flood plains at elevations just above sea level.

\* \* \* \* \*

The basic issue crucial to assessment of the merits of evolutionary theories for the origin of landscapes is ***whether the landforms we observe today have had any permanence***. According to Davisian theory (and other, similar theories), the entire land surface has changed its form slowly and continuously over long periods of time. Davis, for example, supposed that the angle of a slope would decrease as an uplifted area was slowly eroded with the landform changing shape until a low-relief plain near sea level was produced. In short, Davis' view is that landscapes are transient features having no permanence: they have ***evolved***. All features of the earth's surface are viewed by the Davisian system as being at various stages along a continuum of change.

An alternate idea is the ***non-evolutionary*** or what might be called the catastrophic theory for the origin of landscapes. Instead of being the products of long continued processes operating at essentially modern rate, scale and intensity, landscapes could be remnants formed by ***catastrophic*** processes which acted at significantly increased rate, scale and intensity above what we observe today. The ancient processes which formed the landscape would be discordant with modern processes acting on that landscape; no continuum of change and no stages of evolution would exist. Modern erosion processes would be viewed as entirely ***destroying*** an ancient landscape, not ***transforming*** it from one equilibrium stage to another. Such a landscape would contain ***relict*** landforms, surface features which were created by erosional or depositional processes no longer acting. Relict features on the earth's surface would make the landscape appear as a "museum," and such features, in contrast to the Davisian system, would have a great degree of ***permanence***.

It is not well appreciated, but nevertheless true: ***evolution of landscapes has simply been assumed, not proved***. The non-evolutionary or catastrophic theory has largely been spurned or ignored by the majority of geomorphologists, as the catastrophists were supposedly refuted more than a hundred years ago. Now with the recent rebirth of interest in catastrophism as an important element of geomorphology the alternate landscape theory needs to be considered.

## ELEVATED PALEOPLAINS

According to evolutionary theories for the origin of landscapes, elevated plains should be rapidly incised by erosion and bear a well-developed drainage system in only a few millions of years. **Elevated**, low relief land surfaces, therefore, should be evidence of the "youthful" stage of landscape evolution, while **low-lying**, low relief surfaces ("peneplains") might indicate the "old age" stage. C.R. Twidale, a physical geographer from Australia, argues that remnants of old paleosurfaces of low relief (what he calls "paleoplains") constitute an important part of many contemporary landscapes in various parts of the world. Some of these elevated paleoplains are assigned "Jurassic" or even "Triassic" ages (approximately 200 million years in the evolutionary-uniformitarian estimates of age). Examples of elevated paleoplains include the enormous Gondwana Surface of southern Africa (a large part of which has been assigned a "Cretaceous" age) and various paleoplains of central and western Australia (some of which has been assigned probable "Triassic" age). L.C. King believes that these paleoplains were formed by erosion due to sheet flooding of the surface (the "pediplain" idea). Today they are being destroyed by downcutting erosion in stream channels.

What is amazing is that these plains have survived without major stream channel erosion. Twidale says, "The survival of these paleoforms is in some degree an embarrassment to all the commonly accepted models of landscape development." He notes that the Davisian theory offers "no theoretical possibility for the survival of paleoforms," and marvels at the "ample time for the very ancient features preserved in the present landscape to have been eradicated several times over."

## UNDERFIT STREAMS

Evolutionary theories for the origin of landscapes assume near constancy of discharge of streams and a steady rate of erosion as a landscape evolved. It is with interest that we look at stream and river valleys for evidence of ancient water flow rates. Studies by G.H. Dury on modern stream channels and river valleys prove that many are too large for the streams that they contain. He argues that most modern streams at some point on their channel are "**underfit**." Dury speaks of the "continent-wide distribution of underfit streams." Using channel meander characteristics, Dury concludes that streams frequently had 20 to 60 times their present discharge.

H.F. Garner calls our attention to examples from all continents of dry channels associated with underfit streams which once carried surges of flood waters. Evidence is found in relict channel labyrinths along the Mississippi River in eastern Missouri, in the central Sahara south of Tibesti, in the sculptured terrain of Wright Dry Valley, Antarctica, and in the scabland of eastern Washington State. The anastomosing channels of eastern Washington are now believed to have formed by floods which more or less simultaneously inundated 10,000 square miles with water to a depth of as much as 400 feet. The enormous dry channels, giant waterfall scars and colossal boulder and gravel bars of eastern Washington are relict landforms not forming by extant processes along the present Columbia River.

## **SUBMARINE CANYONS AND DEEP-SEA VALLEYS**

Evolutionary theorists for the origin of landscapes also suppose that ocean floor topography evolved. The continental slope around the submerged margins of all the continents is often cut by incisions, ravines and valleys, the most spectacular of which are **submarine canyons**. Like their counterparts on land, submarine canyons usually have dendritic pattern, steep walls, sinuous valley, and V-shaped cross-section. Some submarine canyons are associated with the mouths of large rivers (e.g., the Congo, Columbia, Hudson and Rhone rivers), and serve as conduits for transport of terrigenous sediments from continents to the deep ocean basin. Most canyons, however, are not associated with the mouths of modern rivers, and some are not even on the continental margin, but occur around islands. The Great Bahama Canyon in the Bahamas appears to be the world's deepest canyon (depth 14,000 feet, width 40 nautical miles, length 125 nautical miles) being more than twice the size of the Grand Canyon!

Even more amazing are the **deep-sea valleys** found on the floors of all the major oceans. These can be traced across thousands of miles of deep-sea floor and are known to contain sediment as coarse as gravel moved unimaginable distances from presumed continental sources.

The Origin of submarine canyons and deep-sea valleys has long-puzzled marine geologists. What process or processes could erode such canyons and valleys so far below sea level? F.P. Shepard, who has studied submarine canyons and valleys for more than 50 years, can make few definite statements about their origin. His book leaves the origin of submarine canyons and valleys a major unsolved mystery. Turbidity currents, episodic, aqueous gravity flows on the sea floor, may explain the major mode of sediment transport, and possibly

some canyon erosion, but such phenomena would be required on an extremely catastrophic scale to explain the gravel in deep-sea valleys so far from continents. The data indicate that most submarine canyons and deep-sea valleys are relicts, formed at earlier times, not evolving on a daily basis.

## CONCLUSION

The data of geology directly challenge the theory that the earth's landscapes slowly evolved to their present configuration. Instead, a catastrophic view for the origin of landscapes seems most reasonable. Could the landforms of earth include many features related to widespread flooding and glaciation? Such an interpretation seems most natural. Steady evolution? — No!; Catastrophe? — Yes!

Quoting Steven Austin, "Did Landscapes Evolve?", **ACTS & FACTS**, April 1983 *Impact* article, posted at [www.icr.org/article/did-landscapes-evolve](http://www.icr.org/article/did-landscapes-evolve) .

One reason for quoting Dr. Austin's article is to emphasize that Biblical creationist thinking about the first few centuries that immediately followed the Genesis Flood must be considered within **catastrophist** Flood-consistent geology concepts, --- because gradualistic **uniformitarian** concepts guarantee geological analysis errors.

### B. RIVER SYSTEMS SHOW EARLIER WATERFLOW DYNAMICS

Secondly, Dr. Austin's above-quoted article reminds us of the fast-and-powerful dramatic forces that have helped to shape Earth's historic geology.

Some of the ancient world's geologic history is recorded in the physical shapes of riverbeds and river-plains, that appear to be permanently carved into the earth as geological documentation of past riverine action.

For example, Dr. Austin alluded to the recognized relationship (citing G. H. Dury) between a meandering river's wavelength and the intensity of that river's historic discharge, when that meandering pattern was formed on a river's banks. That river-flow relationship is described by Michael Oard as follows:

Dury has worked, for years, on relating meander wavelength to river discharge for both present and past rivers. In general, discharge rate increases with the square of the average meander wavelength (Dury, 1976, pp. 222-224; Williams, 1988, pp. 328-330). Dury has found that the average palomeander in the United

States is five times the meander of the current underfit stream or river (Baker, 1983, p. 120). Near the ice front in Wisconsin, the meanders are ten times larger. This implies an average discharge 25 times greater than the present value, and discharge values near the face of the melting ice sheets 100 times greater than present stream-flow in the area. Dury (1976) later modified these estimates with more data, and a better meander geometry—discharge relationship. The revised values came out to 18 and 66 times, in place of 25 and 100 times. He (Dury, 1976) also found consistent relationships between meander wavelength, bed width, drainage area, and several other variables. Dury attributes the much higher discharges of paleorivers to higher precipitation during the ice age, and to melting of the ice sheets.

The above figures for past river discharge are difficult for most uniformitarian scientists to accept.

Quoting page 123 of Michael Oard, An Ice Age Caused by the Genesis Flood (San Diego: ICR, 1990).

It is important to note that riverine systems of immensely greater water-flow and intensity must themselves have a sufficiently *powerful* cause, as well as a sufficiently large *quantity* of water-mass, such as the mass of highly energized water one faces from a hurricane (e.g., Katrina).

**Underfit** river-canyon systems or river-plain systems like the Mississippi River Valley, the Grand Canyon, the Nile River, and the Amazon River are *not* morphologically caused by “peaceful” streams uniformitarianistically eroding land over eons of time. Rather, a huge amount of water, moving with a huge amount of energy, at a huge speed, can produce huge changes in a hurry.

### C. CATASTROPHIC WATERFLOWS CAN PRODUCE CAVITATION

One cause of catastrophic geomorphology change is the process of super-powered erosion called cavitation, an awesome action that ripped apart concrete and bedrock at Glen Canyon Dam during 1983. (Partial vacuums can be formed, at minute levels during high-speed waterflow, providing a ripping force that literally tears apart bedrock.)

Dr. Steven Austin described this waterflow-caused cavitation as ripping through 3-foot-thick, steel-reinforced concrete as well as red sandstone bedrock, in an amazing snowmelt runoff-triggered waterflow, at waterflow rates that approached 148,000 cubic feet *per second*, at the Glen Canyon Dam on the Colorado River just above Grand

Canyon.<sup>23</sup> A lot of water, a lot of energy, a lot of speed, producing catastrophic change in a hurry.

#### D. HYPERCANES CAUSE CATASTROPHIC RAINFALLS & SURGES

Another cause of catastrophic geomorphology change is a hurricane, such as Hurricane Katrina.

But imagine a super-hurricane that moves 3 or 4 times faster than “normal hurricanes” that we moderns have observed in our lifetimes. Such hypercanes are likely to cause 4 times as much physical damage (compared to that of a “normal hurricane”<sup>24</sup>), while dumping more than 10 times as much rainfall, as they hurl themselves much farther inland than do hurricanes of our era, meanwhile sustaining their furious tempestuousness much longer over land (before they eventually fizzle out) than do normal hurricanes.

Such super-hurricanes are called “**hypercanes**” and they can produce catastrophic geomorphology change that we can only imagine. About such hypercanes Dr. Larry Vardiman writes:

If the geologic processes of the Genesis Flood were as catastrophic as biblical and scientific evidence suggests, the oceans would have been strongly heated by the release of magma from the mantle and the conversion of geologic work to heat. During and following the Flood, tremendous quantities of heat and water vapor would have been released into the atmosphere from the oceans. Local weather and global climate would have been dramatically altered for many years.

Kerry Emanuel of the Massachusetts Institute of Technology suggests that hurricanes would intensify beyond normally observed intensities today if they existed over unusually warm water for extended periods of time. He calls these hurricanes, which could have horizontal winds exceeding 300 mph, hypercanes.

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<sup>23</sup> Steve A. Austin, “How Was the Grand Canyon Eroded?”, Grand Canyon, Monument to Catastrophe (Santee: ICR, 1994), pages 106-107.

<sup>24</sup> The relative destructiveness of a hurricane is estimated according to this formula: kinetic energy is equal to one-half of the mass, times the velocity squared. Thus, if you double the wind speed, you quadruple the kinetic energy and therefore also the kinetic energy-caused damage. This estimate is realistic because the damage of a hurricane is fairly proportional to the how much kinetic energy the hurricane has. (See Larry Vardiman, “Hypercanes Following the Genesis Flood”, *cited below*.)

They can be simulated in numerical mesoscale meteorology models when the sea-surface temperature is increased to temperatures warmer than about 30 °C.

This paper will explore the rate of development and intensity to which such hurricanes can reach when sea-surface temperatures are warmer than typically observed today. The amplification of Florence, a weak hurricane which formed in the Gulf of Mexico and moved northward toward New Orleans in 1988, is simulated by artificially setting the sea-surface temperature over a large area of the Gulf to 45°C, about 15°C warmer than the warmest waters in the tropics. The simulated hypercane immediately formed deep convection, dramatically increased its rate of rotation, quadrupled its vertical and horizontal winds, and increased its precipitation rate by a factor of about ten over that of the actual hurricane.

It will be shown that warmer sea-surface temperatures likely during and following the Genesis Flood for many years would have produced hypercanes with great destructive power which could have continued the devastation over continental areas. Extreme precipitation events on the tropical continents for several hundred years after the Flood may have eroded large areas of unconsolidated sediments. In mid-latitude, polar, and high mountainous regions hypercanes probably would have contributed significantly to the accumulation of snow and ice during the “ice age.”

It is recommended that simulations of hypercanes over the open ocean and for cooler sea-surface temperatures be conducted and the size to which they grow be identified. It is further recommended that the impact of heavy precipitation, winds, and storm surges be studied on the erosion of unconsolidated land masses near continental boundaries. Also, the contribution of hypercanes to the formation of ice sheets and glaciers during the ice age should be explored.

*Quoting from* Larry Vardiman’s “Hypercanes Following the Genesis Flood”, abstract, posted at [www.icr.org/article/hypercanes-genesis-flood](http://www.icr.org/article/hypercanes-genesis-flood) -- which introduced Dr. Vardiman’s technical paper presented at the 5<sup>th</sup> International Conference on Creationism, the text being published at pages 17-28 of the *Proceedings of the Fifth International Conference on Creationism* (Pittsburgh: Creation Science Fellowship, August 4–9, AD2003; edited by L. Ivey, Jr.).

Thankfully, the kind of hypercanes that would have been *not-so-unusual* in the first couple of centuries following the Flood are *not* likely to ever become frequent in our present world situation. Says Dr. Vardiman:

In *Hypercane Florence* [*computerized extrapolation-based simulations*] with a simulated sea-surface temperature of 45°C many variables increased dramatically compared to the actual values observed in [*the historically real*] Hurricane Florence [*of 1988*]. The horizontal wind speeds quadrupled to over 200 m/s, the vertical wind speeds increased to over 50 m/s, the vorticity increased by a factor of over four, the blowoff covered an extreme area over the Gulf of Mexico, and precipitation rates increased by a factor of ten over those observed in Hurricane Florence, to over 10 inches/hour. Warm sea-surface temperature can intensify hurricanes to hypercane categories in [*< 18*] hours.

The size and intensity of such hypercanes would be devastating if they occurred today. They don't occur because the sea-surface temperature never reaches 45°C, rarely exceeding 30°C, which is the threshold for major hurricane development used by hurricane forecasters (Dunn & Miler, 1964, p. 129).

Quoting from Larry Vardiman's "Hypercanes Following the Genesis Flood", Results and Conclusions, posted at [www.icr.org/article/hypercanes-genesis-flood](http://www.icr.org/article/hypercanes-genesis-flood).

As a "soon-after-the-Flood" weather –pattern scenario, hypercanes can explain a serious dynamic for changing Earth's geomorphology, not locally, but globally:

For every doubling of wind speed, the damage is quadrupled. Most damage and loss of life from hurricanes is actually caused by the storm surge, a buildup in water depth as a hurricane sweeps water toward a coastline. The flooding of coastlines by surges 20-30 feet deep from typical hurricanes could be increased many times over by hypercanes which would be many times larger and more intense.

It seems likely that the presence of large regions of warm sea-surface temperature during and immediately following the Genesis Flood would have caused many hypercanes to have occurred over the oceans and to have made landfall on the eastern side of continents in the subtropics [*e.g., the Mid-eastern lands would be overreached by Indian Ocean-born hypercanes*]. These hypercanes have probably been particularly frequent and intense above mid-ocean ridges where significant quantities of heat would have been released. When these hypercanes made landfall, they would have dumped massive quantities of rain on as yet unconsolidated sediments and produced incredible

amounts of erosion. Storm surges would be devastating to the coastal boundaries. The most likely location for hypercane landfalls and such erosion would have been on the eastern edges of continents between about 10° and 40° latitude [the “10-40 window”]. . . . .

It has been suggested that once a “lava crust” has been formed on the mid-ocean ridges, heat flow from the magma to the water would decrease rapidly, preventing the formation of warm sea-surface temperatures and reducing the likelihood of hypercanes. The reduction of heat flow and the subsequent formation of hypercanes would have occurred at some point [soon] after the Flood. We obviously don’t have the formation of hypercanes today, although there is some evidence for periodic releases of significant quantities of heat along the mid-ocean ridges, particularly in the southern Pacific. However, during the Flood and for some time following it, the extrusion of magma onto the ocean floor would have been so rapid that a “lava crust” would have been continually cracked and pushed aside as new magma was released. In fact, I anticipate that the opposite problem [*i.e., opposite of the problem of rapid cooling*] may have been likely. The amount of heat released from mountains of magma hundreds of miles wide, thousands of miles long, and thousands of feet high being extruded rapidly during the year of the Flood and for possibly hundreds of years thereafter, would have likely produced so much heating that I fear the oceans would have reached the boiling point at places and burst into steam geysers. The possibility of this catastrophic scenario has been suggested by [John] Baumgardner (2003) in these proceedings.

Quoting from Larry Vardiman’s “Hypercanes Following the Genesis Flood”, Results and Conclusions, posted at [www.icr.org/article/hypercanes-genesis-flood](http://www.icr.org/article/hypercanes-genesis-flood) .

#### E. CATASTROPHIC MUDFLOWS CAN PRODUCE RIVER-CHANNELS

Now, consider one more agent of catastrophic geomorphology change: **mudflow**, such as the mudflow illustrated in the aftermath of Mount St Helens’ eruption during 1980. A mudslide is a powerful flooding action in which the surging water becomes powerfully mixed with the earth (*i.e.*, mostly soil) in its pathway. The power of a catastrophically energized mudslide can carve a river channel in a hurry:

#### **RAPID EROSION**

Erosion during volcanic eruptions at Mount St. Helens was accomplished by scour from steam blast, landslide, water waves, hot pumice ash flows (pyroclastic

flows), and mudflows. Since the eruptions, the erosion process has been dominated by sheet flooding and channelized flow of water, with occasional mudflows. About 23 square miles of the North Fork of the Toutle River Valley was obstructed by two-thirds cubic mile of landslide and pyroclastic debris, which has been rapidly eroded since 1980. Jetting steam from buried water and ice under hot pumice reamed steam explosion pits with associated mass-wasting processes at the margins of pits, producing rills and gullies over 125 feet deep. Photographic documentation assembled by ICR scientists demonstrates that very pronounced rills and gullies had formed at the margins of seam explosion pits before May 23 - less than five days after the pumice was deposited. The rills and gullies resemble badlands topography, which geologists have usually assumed required many hundreds or even thousands of years to form.

**Mudflows, from Mount St. Helens, were responsible for the most significant erosion. A mudflow on March 19, 1982, eroded a canyon system up to 140 feet deep in the headwaters of the North Fork of the Toutle River Valley, establishing the new dendritic [i.e., with a branched-out appearance, somewhat like a tree trunk that branches outwardly] pattern of drainage.** As ICR scientists surveyed this new terrain, they began to contemplate the processes which may have formed the Grand Canyon of the Colorado River. The little "Grand Canyon of the Toutle River" is a one-fortieth scale model of the real Grand Canyon. **The small creeks which flow through the headwaters of the Toutle River today might seem, by present appearances, to have carved these canyons very slowly over a long time period, except for the fact that the erosion was observed to have occurred rapidly [i.e., in a few days, not years or centuries or millennia] !** Geologists should learn that, since the long-time scale they have been trained to assign to landform development would lead to obvious error on Mount St. Helens, it also may be useless or misleading elsewhere.

Steve A. Austin, "Mt. St. Helens and Catastrophism", **ACTS & FACTS**, July 1986, *Impact*, posted at [www.icr.org/article/mt-st-helens-catastrophism](http://www.icr.org/article/mt-st-helens-catastrophism), with more extensive analysis in Steven A. Austin's "Rapid Erosion at Mount St. Helens", in *Geoscience Research Institute's Origins*, vol. 11, issue 2, pages 90–98, 1984, q.v., posted at [www.icr.org/article/erosion-mount-st-helens](http://www.icr.org/article/erosion-mount-st-helens) .

In short, mudflows, if catastrophically energized, can cut through solid rock to produce a river channel/canyon system geomorphologically analogous to the Grand Canyon, using a lot of water (mixed with soil, in the form of mud), a lot of power, a lot of speed, in only a very little time.

For review, consider the following (above-discussed) 5 catastrophist geology concepts, all of which will now be briefly mentioned in the next section, where a new explanation of Genesis 10:25 is proposed:

- A. CATASTROPHES EXPLAIN MUCH OF THE EARTH'S LANDSCAPES
- B. RIVER SYSTEMS SHOW EARLIER WATERFLOW DYNAMICS
- C. CATASTROPHIC WATERFLOWS CAN PRODUCE CAVITATION
- D. HYPERCANES CAUSE CATASTROPHIC RAINFALLS & SURGES
- E. CATASTROPHIC MUDFLOWS CAN PRODUCE RIVER-CHANNELS

## **VIII. ANALYTICAL CONCLUSIONS**

Two more important clues, from Scripture, need be mentioned.

First, as noted above, Peleg was born about 100 years after the Flood.

An earlier technical paper, by Thomas D. Ice & James J. S. Johnson, "Using Scriptural data to Calculate a Range-Qualified Chronology from Adam to Abraham, with Comments on Why the 'Open'-or-'Closed' Genealogy Question is Chronometrically Irrelevant" (presented to the Evangelical Theological Society's southwest regional meeting, 3-1-AD2002, posted at [www.icr.org/adam-abraham-chronology](http://www.icr.org/adam-abraham-chronology)<sup>25</sup>), shows that there is no good theological reason for trying to stretch the inerrant timeframe information that is quantified, in Scripture, regarding event-to-event timeframes (that allow measurement of time from the Flood to the birth of Peleg).

Thus, with confidence we can measure the birth of Peleg as occurring 100 years after the Flood, plus or minus no more than 5 years.

Under current creationist thinking about the post-Flood Ice Age, Peleg's birth would have occurred centuries **before** the Ice Age "melted down". Therefore, whatever dramatic geologic phenomena was occurring when Peleg was being named "Peleg" must have occurred about 100 years after the Flood, i.e., at the beginning of the post-Flood Ice Age.

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<sup>25</sup> This technical paper appeared later, in an abbreviated form, as James J. S. Johnson's "How Young is the Earth? Applying Simple Math to Data Provided in Genesis", **ACTS & FACTS**, vol. 37, issue 10 (October 2008), pages 4-5 (posted as [www.icr.org/article/4124](http://www.icr.org/article/4124)).

Second, another strange clue is presented by the numerical data in Scripture: the lifespans of the patriarchs drastically drop at when the Messianic lineage reaches Peleg's generation --- why? (What geo-ecological change happened during Peleg's lifetime that somehow irreversibly shortened everyone's lives thereafter?)

First, we find here a sudden drop in the life-span of the patriarchs that is unparalleled in the entire genealogy. Until the time of Eber, no postdiluvian patriarch is said to have lived less than 433 years. But now [i.e., with Peleg], without any explanation [i.e., except the cryptic allusion to the earth being "divided" in Peleg's "days"], the life-span drops to 239 years and never exceeds that number again! This represents a permanent drop in life-span of 45%, as opposed to the 23% drop from Shem to Eber.<sup>26</sup>

So, what was the major change that occurred in Peleg's lifetime, that correlates to drastically reduced life-span, and is it related (or not) to the earth being "divided" in his "days"? Would the weather events of Peleg's "days" have accompanied a non-cyclical climate change<sup>27</sup> so drastic that human bodies accelerated their aging (and thus their dying processes)? Those kinds of questions are outside the scope of this present paper, thankfully!

Yet, that very historicity of the reduced life-spans, especially as "spiked" in Peleg's generation, is itself another striking reminder that a **catastrophist** understanding of Earth history is needed, in order to analyze and to understand the times and conditions immediately after the Flood, --- because a uniformitarian approach will guarantee error every time!

If the worldwide "division" (that Peleg was named for) was *geologic*, as opposed to *linguistic*, what was it? Or, realistically speaking, what could it have been?

It is now suggested that Peleg's generation witnessed the earth, at the global level (especially in light of Job 38:25-27), being "**riverized**" (a literal approach to translating the Hebrew verb *palag*) -- i.e., being hydro-dynamically carved into major riverine systems. These river systems were huge, and they were cause by huge

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<sup>26</sup> John C. Whitcomb & Henry M. Morris, *The Genesis Flood: The Biblical Record and its Scientific Implications* (Phillipsburg, NJ: Presbyterian & Reformed Publishing, 1998), page 482.

<sup>27</sup> Perhaps, prior to the permanent (post-Flood) cool-off, there was a partial cloud "canopy" that somewhat covered the earth (albeit less than any pre-Flood canopy), shielding harmful radiation from the sun. Once the global sea-surface temperature permanently cooled, perhaps 20°C (or more), the evaporation rate over the oceans would seriously (and permanently) decline, lessening the ongoing availability of at-sea rainclouds that could be used as "fuel" for future hypercane formation.

extremes in weather -- hypercanes, catastrophic mudflows, and furious water-flows that ripped through bedrock via cavitation dynamics.

For an *a fortiori* analogy, try to imagine the memorable impact of a record-breaking blizzard if you have lived through one. Now imagine that the weather events that were occurring about 100 years after the Flood make such blizzards look like (relatively) “small potatoes”. The extreme weather that followed the earth’s post-Flood’s adjustments was spectacular (and **terrifying**) enough, based on this paper’s assumptions and analysis, so it is quite likely that a man like Eber might name one of his sons (like Peleg) for the amazing “riverization” that was being formed, all over the earth (especially the earth known to Eber), during the “days” of Peleg’s infancy.

To an eye-witness of these meteorological and geomorphological upheavals, these catastrophically formed major river systems would then (likely) have included abruptly formed and hugely proportioned river valleys, river plains, and river canyons, many with dendrite river-mouth patterns, and many with huge dimensions as far as the eye can see, yet all being produced by extreme weather events and weather patterns that we can only imagine, --- e.g., with the aid of recent memories of the Glen Canyon Dam **cavitation**, and with recent memories of the **mudflows** at Mount St Helens (which carved a miniature version of the Grand Canyon, through solid rock, in a matter of days after the Mount St Helens volcanic eruption (and steam-blast), --- and, e.g., with the help of Dr. Larry Vardiman’s computer simulations and descriptions of **hypercanes**.

These catastrophic river systems, especially if a few happened to be quickly and powerfully formed nearby, would be as memorable as a close encounter with a lightning bolt, or a first viewing of the Aurora Borealis, or surviving a serious earthquake, or a record-breaking blizzard.

At least the above “Peleg model” provides a possible scenario, --- that fits the available Scriptural data (and attempts to do so with the most literal reading of Genesis 10:25), --- for why Eber, who may have been an amazed eye-witness of such catastrophist “riverization” events, might decide to memorialize such important life experiences (as Biblical patriarchs were known to do) by naming one of his sons “River”.

May the God Who riverized the earth’s waterflow-channels, even in the wilderness “wherein there is no man” (**Job 38:26**), be blessed through His Son (Peleg’s greatest Descendant), as we study, appreciate, and declare<sup>28</sup> “the works of the LORD”.

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<sup>28</sup> See **Psalms 118:17**, where the psalmist reports his living opportunity to “declare the works of the LORD”. The Hebrew verb translated “declare” is a form of סָפַר [*saphar*], meaning “to record, to document, to write down”, the noun derived therefrom often being translated as “book”.