

Continental Drift And The Fossil Record

Bernard E. Northrup

Central Baptist Seminary Minneapolis, Minnesota

A Lecture Given August 13, 1979 at the Annual Creation Convention in Anaheim, California.

I am pleased with the subject which was assigned to me by the committee. I feel very strongly that the separation of the continents is explicitly confirmed by the fossil record. First of all, however, I want to make it clear that I will not be talking about continental *drift* as such. This is the language of the macrochronologist. The harmonization model of Biblical and geological history which I have developed requires all of historical geology to fit into Biblical time. It does not seek to fit the Bible into geological time and thus rejects the *chronology* of the historical geologist. Therefore I will be talking about abrupt continental rifting and separation. But some will ask: "Is continental separation a Biblical phenomenon at all?" I firmly believe that it is on the basis of a four-fold "fossil" record.

Now a fossil is something that was once a living creature or a thing which has, by some near miraculous means, been preserved so that its original form can be to some extent visualized by a trained eye. I include "thing" in the definition because it is customary for geologists to talk of fossil raindrop prints and fossil deserts. The word is not merely limited to the remains of once living creatures. In the early part of my discussion I want to use the word "fossil" in this wider than normal sense as I deal with remnant traces of records from the past which support continental division.

The Linguistic Fossil Data

As creationists, we have been neglectful of a sizable reservoir of information on continental rifting which is contained in the languages of man. Now it should be a basic Biblicist presupposition growing out of revelatory materials that all mankind once had a single tongue before Babel. It was a deliberate act of the Creator, acting in judgment slightly more than two full generations after the Noahic flood, that produced earth's babel of tongues. This information is drawn from the two generation list of Japethites in Genesis 10:1–5. The list is climaxed with the- statement, "By these were the isles of the Gentiles divided in their lands; everyone after his tongue, after their families, in their nations."

The-second piece of evidence is the two generation list of Harnites. This occupies Genesis 10:6–20. In verses 13 and 14, Moses discusses the offspring of Mizraim or Egypt, using plurals to refer to the offspring. This may well reflect Moses' extensive knowledge of Egyptian, genealogical history as a result of his training in Pharaoh's court, in this section only is there a reference to third generation offspring. These are the Philistines (plural) and the Caphtorites (plural) (verse 14). The two generation discussion of Hamites is again climaxed by a reference to the division by tongues in verse 20. We must conclude that, because of the limited number of people at Babel, the original branches of languages were quite limited and could not possibly represent all of the present divisions of languages.

Furthermore, we should be able to conclude on the basis of the observation of the present linguistic diversification that the fragmentation of the languages has been a continuing process for the succeeding centuries. For example, there are far more Hamitic Languages in the world today than there were Hamites available at the tower of Babel. It also may be observed that many of the world's languages retain remnant traces of common origin through their com-

mon roots. An illustration is readily available in the words for *father* and *mother* which retain basic similarities, though found in a multitude of man's languages. Now some of these similarities admittedly can be traced in historical process and contact between language groups. This unquestionably has spread the use of a root to more than one language group. Still, there are many similarities available between languages impossibly separated by great linguistic gulfs which can only be explained on the basis of common origins at Babel.

But how is this relevant to continental division? The key Biblical word on the subject, *peleg*, is a significant linguistic fossil in several unrelated languages. Its meaning in these various languages where it occurs bears clear testimony to its use in Genesis 10:25. Through that it gives remarkable support to the thesis that there was major continental rifting after the Noahic flood. Now I believe that Babel occurred three generations before the physical division of the continents. This conclusion is based upon the foregoing discussion of Genesis 10 and the implication of that chapter that Babel occurred two generations after the flood. Also relevant is vital information in Luke 3 and the old Septuagint Greek translation of Genesis 11:10–18, showing that five generations of Semites were born between the flood (*The Cataclysm* in the LXX) and the division of Genesis 10:25.

The word *peleg* in Genesis 10:25 must be a fossil word surviving from the common language that man used before Babel since it occurs in all three of the family groups of Noah's offspring with similar meaning. The following discussion is little more than a cursory survey of the evidence that lies embedded in the linguistic roots of man's languages. The evidence indicates that each of the families that departed from Babel used the root stock *PLG* to refer to the sea and to division by water. From that base a secondary meaning of *division into groups* was derived.

PaLaG in the Semitic Family

PL	Probably "a trench, an excavation" in Ugaritic
PaL	To split, divide, separate (Heb., Aram. Sanscrit, Greek)
PaLa	To split, divide, separate (Hebrew)
PaLaG	Genesis 10:25 "divide by water" (Heb., Gr.) "to divide" (Heb., Aram.)
PaLaD	To divide, cut in pieces (Heb.)
PuLaDah	An instrument of division, a sword (Heb.)
Palah	To separate, divide off (Heb.)
PaLaKH	To cleave, cut in pieces, divide, to plow a furrow (Heb., Arab., Aram.)
PaLat	To glide away, slip away (Heb., Arab., Aram.) To flee away in haste, escape
PaLak	To separate, cut off, divide, single out from a whole (Heb., Arab.)
PaLaL	To fall down (Heb.) cf. <i>Fall</i> in Engl.
PaLaM	To tear or to cut into, to tear asunder (as lightning splits the clouds) (Heb.)
PaLaTS	To be broken into pieces, to break into fragments, to quake greatly, to terrify (Heb., Aram.)

A brief look at the Semitic family exposes the following evidence. In Biblical Hebrew *PLG* means "to cleave, to divide or to separate." In Genesis 10:25 the simple passive is used with the word "earth." That the meaning here is concrete rather than metaphorical is borne out by many cognate usages in the languages of the three families of man. That is to say, the meaning is "to divide by water." That water is involved is repeatedly borne out in the research. The intensive Hebrew stem of the root *PLG* is used by God in His challenge to Job (Job 38:25).

The verse parallels the abruptness of continental division with lightning and thunder. My expanded translation which attempts to capture the nuances of the verse is as follows: “Who utterly split assunder by water for an inundation of a place for the going of waters or a way for the lightning of thunders.”

Actually the basic root of peleg appears to be a biliteral root *PL*. This suggests that its origins are pre-Semitic for Hebrew prefers trilateral roots. It appears that the Semitic family has developed this biliteral root in many ways by adding a third consonant. The following is a fairly complete list of examples. The root *PALA'* means “to split, to divide or to separate” as does *PAL-* in Arabic, Aramaic, Syrian, Sanskrit and Greek. The root *palag* which we are considering in Genesis 10:25 normally appears to suggest division by water although it does have metaphorical uses as can also be found in Aramaic. The root *palad* means “to divide, to cut in pieces.” Thus a steel weapon is a *puladah*, an instrument of division. The root *palah* also means “to separate, divide off.” The root *palakh* means “to cleave, to cut in pieces, to divide, to plow a furrow” in Hebrew, Arabic and Aramaic. The root *palat* means, “to glide or slip away, to go away in haste, to escape” in Hebrew, Arabic and Aramaic. Obviously the meaning of separation is present where the biliteral root *pal-* is found. The root *palak* means “to separate, to cut off, to divide, to single out from a whole” in Hebrew and Arabic. The root *palal* extends the idea of separation in a different direction for it means “to fall, to sink down, to cast oneself down” much as it does in English. The root *palam* means “to tear or cut in two, to tear assunder” (as lightning splits the clouds.) The root *palats* means “to- be broken into pieces, to break into fragments, to quake greatly, to terrify” in Hebrew and in Aramaic.

Perhaps of special significance is the fact that the root under consideration, *palag*, often contains within it a reference to water. It is used to refer to a stream of water in Hebrew, Coptic, Ethiopic and in Greek. The root is used in Akkadian to refer to irrigation canals which carried the water throughout the farming land of Mesopotamia.

However, an examination of the Greek usage (of the family of Japeth) of the root letters *PL* and *PLG* clearly shows that in the majority of the instances this root was used of the ocean. In Liddell and Scott, *A Greek English Lexicon*, the greatest Classical Greek lexicon, there are eighteen entries which contain the root *PLG*. To save time and space I will simply chart some of the meanings of the great variety of uses of *palag* in this Japethitic language.

Classical Greek Usage of PLG

The Verbs PeLaGidzo used of:

1. Forming a sea or a lake by a river that has overflowed
2. Places to be flooded and under water
3. The act of flooding
4. Keeping the sea or crossing the sea

The verb PeLaGoo means “to turn into sea, to flood”

The Nouns PeLaGios is used:

1. Of the sea itself as *pelagian hala* “the broad sea”
2. Of animals living in the sea
3. Of being out on the open sea
4. Of seamen or ships
5. Of the goddess Aphrodite who was born out of the sea

PeLaGisma means “an inundation”

PeLaGismos refers to one’s “being at sea”

PeLaGitis refers to being “of” or “on the sea”

PeLaGobates means “one who walks upon the sea”

PeLaGodromos is “running or sailing on the open sea”

PeLaGoLimen is a harbor formed in the open sea by means of sandbags

PeLaGopLoos “sailing the sea”

PeLaGos means “the sea,” esp. “the high sea, open sea, the main

PeLaGostoLos on, or sailing upon the sea

PeLaGostrophos “rowing through the sea

PeLaGotrophos sea-nourished

The Adverb

PeLaGosde meaning “to, into or toward the sea”

It is quite apparent that every Greek usage involves the sea in some way. Furthermore the root *PL* is found in a closely allied Greek root *pelakao*. This root primarily has to do with the splitting apart of wood by an axe. There are eighteen illustrations of different forms of this greek verb in Liddell and Scott. Apart from the root which gives us our word “pelican,” a bird who splits the sea when diving for fish, practically every use of the root has to do with abrupt splitting apart by an axe. A good illustration is its use in the Greek word for the sacrificial axe or the executioner’s axe. We have in English several words which directly are derived from Greek usage. The words *archipelago* and *pelgaic* depths both have reference to the ocean. Of course, our word *pelagra* has reference to the watery separation of the gums above the teeth in a disease. To return to Greek origins, the Greek noun *phalga* is the name of the western Mesopotamian region where the Chaboras River and the Euphrates River meet.

This brief linguistic excursion by no means turns up all of the linguistic fossils which bear a corollary testimony to the meaning of *peleg* in Genesis 10:25. The linguistic evidence is overwhelming that Genesis has reference to a division of the land mass by water in a post flood Biblical catastrophe. This I conclude is the basis for the geological evidence which wrongly has been interpreted in historical geology as proof that the continents *very slowly* separated and moved to their present locations in a movement that began more than two hundred or more millions of years ago. I believe that the Semite *Peleg* was so named “for in his days the earth was divided by water.”

The Traditional Fossil Data

There are other fossils left by man in his own records which bear testimony to the fact that the earth was divided physically after the Noahic flood. To save time, only two examples will be given. The Leni-Lenape, an Algonquian Indian people from the northeast, have preserved a chronicle of man’s history which contains fascinating elements. The Wallum-Olum document appears entirely to pre-date influence by missionaries. Here are some excerpts from the translation made by Professor Brinton.

After the rushing waters had subsided, the Lenape of the turtle were close together in hollow houses living together there. It freezes where they abode: it snows where they abode: it storms where they abode: it is cold where they abode. At this northern place, they speak favorably of mild, cool lands, with

many deer and buffalo. As they journeyed, some being strong, some rich, they separated into house builders and hunters — all the cabin fires of that land were disquieted, and all said to their priest: ‘Let us go.’ To the snakeland, to the east, they went forth, going away, earnestly grieving. *Split assunder, weak, trembling, their land burned*: they went, torn and broken, to the snake island. (This almost certainly confirms migration from northeastern Asia unto the continent of North America.) Those from the north being free, without care, went forth from the land of snow, in different directions. ...Beaver and big bird said, ‘let us go to snake island’. —Those of the north agreed, those of the east agreed, *over the water, the frozen sea they went* to enjoy it. Over the wonderful slippery water, *on the stone hard water all went*, on the great tidal sea, the muscle bearing sea. Ten thousand at night, all in one night, to the snake island, to the east, at night, they walk and walk, all of them — they all come, they tarry at the land of the spruce pines; those from the west come with hesitation esteeming highly their old home at the turtle land. There was no rain, and no corn, so they moved farther seaward. At a place of caves, in the buffalo land, they at last had food, on a pleasant plain.” (Spence, Lewis, *The Myths of the American Indians*. London: George G. Harrap Co., 1916).

Two facts are very noteworthy. It was the disturbance of the continent by fire and splitting assunder that caused these people to begin their migration to the east by means of the frozen sea. The constant reference to the frozen sea furthermore shows that continental division and the ice age were corollaries, and suggests the conclusion supported by physical evidence that the ice “age” is consequent upon continental division. Furthermore, the passage, if it has any historical accuracy whatsoever, requires us to shorten the macrochronology of historical geology drastically. It would indicate that continental division was still going on while man was migrating from his home in the west to his home in North America.

There is another American Indian Legend which describes survival on a floating island during a terrible storm. The Indians involved finally escaped when their land mass collided with a larger one, the continent of North America where they now live. Many such pieces of fossil traditional evidence await the believing historian’s research spade. Here is the Okanogan Legend which refers to a great island populated by white giants and of catastrophism survived on a floating island.

Long, long ago when the sun was young and no bigger than a star, here was an island far out at sea called Samahtumiwhoolah, or “White Man’s Island.” Now giants lived there. The giants were white and their leader was a tall white woman, called Scomalt. At first there was peace, but at last war came and the white giants fought with each other. This made Scomalt angry. Scomalt had a strong heart. She drove the unruly ones together to the farthest end of the island. Then she broke off this piece of land and with her foot pushed it out to sea.

Many days drifted the floating island. Storms swept over them and the sun beat down upon them. At last all died except one man and one woman. Then the man caught a whale and they saved their lives by eating the blubber. Then their island began to sink, so they made a canoe. They put the blubber into the canoe and then paddled away.

After paddling for many suns, they came to some islands, and at last to the mainland. Here they landed, but *the mainland was not so large as it is now because it had not grown*. But all their whiteness was gone. The sun had burned

them until they were red. All the Okanogans are descended from this man and woman, and therefore they are red. In time to come, the lakes will melt the foundations of the world and the rivers cut it loose. Then the whole world will float as the islands did. This is the end of the world, the Itsowleigh.” (Judson, Katharine B., Ed. *Myths and Legends of the Pacific Northwest*. (Chicago: A.C. McClurg and Co. 1012 [sic, 1912]. pp. 105-6).

Undoubtedly there is much here that is legendary material. Nevertheless, there are striking elements which are very difficult to explain. Furthermore, these have elements in common with stories originating more than one-third of the way around the world as will be seen in the next illustration.

Perhaps the most startling of all of the traditional material however is Plato’s story of Atlantis. In his two books *Critias* and *Timaeus*, seldom seen in the library, is what I believe to be a clear description of continental division from the viewpoint of a North African.

In those days the Atlantic was navigable; and there was an island situated in front of the straits which are by you called the Pillars of Heracles; the island was larger than Libya and Asia put together, (25) and was the way to other islands, and from these you might pass to the whole of the opposite continent which surrounded the true ocean; for this sea which is within the Straits of Heracles is only a harbour, having a narrow entrance, but that other is a real sea, and the surrounding land may be most truly called a boundless continent. Now in this island of Atlantis there was a great and wonderful empire which had rule over the whole island and several others, and over parts of the continent, and furthermore, the men of Atlantis had subjected the parts of Libya within the columns of Heracles as far as Egypt, and of Europe as far as Tyrrhenia. This vast power, gathered into one, endeavoured to subdue at a blow our country and yours and the whole of the region within the straits; and then, Solon, your country shone forth, in the excellence of her virtue and strength, among all mankind. She was pre-eminent in courage and military skill, and was the leader of the Hellenes. And when the rest fell off from her, being compelled to stand alone, after having undergone the very extremity of danger, she defeated and triumphed over the invaders, and preserved from slavery those who were not yet subjugated, and generously liberated all the rest of us who dwell within the pillars. But afterwards there occurred violent earthquakes and floods; and in a single day and night of misfortune all your warlike men in a body sank into the earth, and the island of Atlantis in like manner disappeared in the depths of the sea. For which reason the sea in those parts in [sic, is] impassable and impenetrable, because there is a shoal of mud in the way; and this was caused by the subsidence of the island.

The points of contact between Central American and Mediterranean civilizations and customs certainly could bear further study as evidence for continental separation after the Noahic flood. However, neither the linguistic nor the traditional evidence for post flood continental separation is the main purpose of this study. The major fossil evidence supporting post flood continental division is, in fact, the geological evidence.

The Geological Fossil Data

The study of the fossils which are contained in the layers of the sedimentary and igneous deposits on the earth’s surface must be the object of a forensic study to determine the manner of their death and the cause of it. In effect, the researcher must perform an autopsy on each crea-

ture that once lived and examine every fragment of evidence, possible to determine the setting of that creature's death. The researcher must serve as the coroner. Only if he has done his work well and with the greatest of care will the fossils have an opportunity to give testimony concerning their life and death. "He being dead yet speaketh" appropriately describes the testimony of the fossil when it is correctly understood. And what will the fossil say? The question of the researcher must never be "how can I make these fossils agree with my presuppositions?" He must recognize that the fossils are living creatures which have passed through the catastrophic events of earth's history and have died from these catastrophies. How did they die? Which catastrophe was it that destroyed these creatures? No single answer can be given for all fossils. Let the earth speak to the researcher and a multitude of voices will join in chorus to describe in turn, layer by layer, the event series from the third day of creation until the last great volcano blast has scattered its ashes and dust forth to bury multitudinous numbers of earth's creatures or until the last ton of chilling ice has retreated from the prairies and tundras to expose those life forms entombed by its chill of death.

Let the fossils speak, and then do not ignore them. If they contradict your model of earth's history, then remember that it is a model, an attempt to interpret earth's history on the basis of the physical and revelational facts which you have in hand, sorely dependent upon your skills and presuppositions. The researcher in this area must always be ready to revise his harmonization model if he finds that it is not in agreement with the historical facts from these two key sources.

Understanding The Fossil Data

We will begin our consideration with the testimony of the flood fossils concerning continental division. To do so is to ignore the fact that, in reality, strata from the very early creation days testify concerning the fact of a post-flood continental division. For example, I have examined what I believe to be Precambrian and Paleozoic strata in the steep bluffs along the coast south of Sao Paulo, Brazil. They have been ripped away from the coast of Africa in the catastrophic division of the continents. But let us return to the testimony of flood fossils.

The first problem which we face is the difficulty of actually identifying which layers of earth's great deposits really are the deposits of a great universal flood. An error, held in common by the two major groups of flood geologists, is the conclusion that one universal flood is the sole source, or at least the primary source, of all geological deposits. This error is present whether the flood geologist is a Gap theorist or a Noahic Flood theorist. Both views essentially conclude that all or practically all geology comes directly from *The One Flood* which is held dear as the means of harmonizing geology with Genesis. Both the Gap theorist and the Noahic Flood geologist err in this conclusion. The many hydraulic, aeolian and volcanic deposits of later geological history, so plainly recorded in earth's layers, cannot possibly be accounted for in a single monocatastrophic model.

One of the chief problems which has dogged creationism from the very beginning was identified by Dr. George Howe in a lecture in 1968. He said in effect, "One of our major problems in creationist circles is the fact that we have far too many armchair geologists. Everyone wants to sit at home and spin their theories and no one wants to go out in the field to examine the evidence and see whether they are right or not!"

Both the Gap theorist and the Noahic Flood theorist fails in his attempt to harmonize geology and Genesis by a single cataclysm. Geological history simply does not end in a universal flood. If the Gap Theory were true, then all life from the pre-Adamic world of Genesis 1:1 must have been totally destroyed by a catastrophic universal flood and all of geology is to be accounted for by it. The Noahic Flood theorist, for all practical purposes, walks hand-in-hand

with this conclusion, moving the catastrophe, however, to Genesis 7 and 8. While both approaches are right in recognizing a universal flood in their related passage, both are wrong in thinking that their flood exclusively is the only universal flood. Furthermore, both are absolutely wrong in concluding that geological history ends in a universal flood.

But nothing is more obvious from a careful, extensive examination of the *FINAL* two great series of geological deposits, the Mesozoic and Cenozoic materials, than this: there absolutely is no universal flood recorded in geological layers in either of these latest two periods of earth's history. Both the fossil data and the environment in which those animals lived in Mesozoic times utterly countermand a universal flood deposit interpretation of them.

Let me explain why I say this. The two major characteristics of the Mesozoic deposit series may be summarized as follows: First of all, the Mesozoic was a great time of retreating shores. The slow retreat of the sea and the continuing exposure of the land mass above sea level can be traced with confidence in the Southwest, for example.

Secondly, the Mesozoic was a period in which great winds blew with might beyond that known to man today. These winds scoured the slowly retreating shoreline of our west coast and dumped enormous quantities of wind-driven sands hundreds of miles inland. In some places Mesozoic (retreat of flood) sand dunes are piled nearly 6,000 feet deep. Occasionally these wind-blown sands are associated with creatures better adapted to a shoreline environment. Sometimes these wind dunes contain the mummified remains of the semi-aquatic creatures which we now call dinosaurs.

Thirdly, the Mesozoic deposits clearly give testimony which may either be interpreted to mean that our continent was bobbing up and down above sea level or that gigantic tidal waves generated by submarine earth movements were driving ashore with tremendous destructive force among the windblown sand dunes.

Is this flood material? Again, the fossils decide the question. In the Uinta mountain deposits in Utah, the aeolian and tidal wave deposits are interbedded in a remarkable manner. Often the wind deposits like the Navajo sandstone will be 800 to 1,000 feet thick. These may be studied with spectacular clarity just north of Vernal, Utah. There these wind-blown formations alternate with enormous tidal wave deposits at least eleven times. In these tidal wave deposits are the skeletal remains of creatures of the sea. For example, in the Curtis formation I have found the casts of uncoiled ammonites. These are the prints of the inside of the shells which were packed solidly with the sandy debris of the tidal wave which transported and buried the shell. Another frequent fossil in the area is the belemnite, the core of squid, another marine creature. But above and below the Curtis formation are giant layers of sand dunes deposited by the wind. Is this a flood deposit? No. It is a retreat of flood deposit, caused by the environment described in Genesis 8:1-3. "...and God made a wind to pass over the earth, and the waters subsided.... And the waters returned from off the earth continually... ."

What has been said about the Mesozoic deposits is true also of the last deposit series of the geological record. The Cenozoic deposits are the most recent series in geological history. These are deposits which exhibit massive mountain building and erosion. The forms of erosion found on these newly formed mountain ranges show that they were exposed to the atmosphere while they were being elevated. Precipitation and glacial erosion on these rising mountain ranges is very extensive. I have heard many flood theorists attempt to explain both forms of erosion by means of the rushing, retreating waters of the Noahic flood. I have followed the courses of enough canyons carved by the rushing waters of violent rainfalls, enough canyons carved by the mighty grinding weight of slowly moving ice tongues and

enough canyons carved by the awful violence of once dammed waters that have broken loose to know the difference.

Cenozoic erosion is not flood erosion. It is post-Noahic flood erosion. The Mesozoic and Cenozoic deposits cannot be identified with the Noahic flood except insofar as the Mesozoic deposits represent the long retreat of the Noahic flood. The land forms, the plant fossils and the animal and human fossils of these two periods all testify to the fact that they derive from post-Noahic times.

Where does this leave us then? The only conclusion which can be harmonized successfully with the geological and Biblical evidence is this: the Noahic flood must be represented in geology by the Paleozoic deposits. The 150 days of extreme cataclysmic violence of Genesis 7 and the millennium of slow retreat of Genesis 8–11 can be traced clearly in the deposits of the Paleozoic and Mesozoic periods of history. That is, it can if one does not make the common creationist error of denying the actual evidence and identity of these vastly different geological bodies of evidence. Regretably this view is one that seriously hinders creation studies today. But it is simply the natural corollary of monocatastrophist flood geology. That this approach is impossible is evidenced in many ways. The view that practically all geological history stems from a single catastrophe, a flood, utterly ignores the inescapable depositional evidences that fill the Mesozoic and Cenozoic deposits. In other words, the layers which lie upon the universal flood deposits and obviously were deposited in chronological succession after them are filled with evidences that the land mass was above the surface after the Paleozoic section of earth's history. I have already mentioned the giant sub-aerial Mesozoic sand dunes, obviously wind-blown, that are filled with animal tracks and occasionally a dehydrated carcass like the one displayed in the New York Metropolitan Museum. The major characteristics of the Cenozoic deposits are great mountain building, nearly world-wide volcanic explosions and eruptions followed by violent precipitation and ice erosion. This volcanism is for the most part under the atmosphere and not under the sea. The two are readily distinguishable in the field.

The monocatastrophist flood approach to geology also leaves unsolved many ecological problems stemming from the remarkable dominance of certain types of life forms in certain stages of geological history. For example, how will the flood geologist account for Clifford Burdick's evidence that angiosperm trees existed in the Proterozoic (before the beginning of the universal flood deposits) while the Paleozoic deposit which lies directly upon these show almost total dominance by gymnosperm or spore-bearing plants? Was the flood really an intelligent agent capable of this kind of discrimination in its burial patterns? Or is there a more intelligent explanation?

How can the flood geologist account for the remarkable fact that untold numbers of shore line and marine reptiles perished in the Mesozoic deposits while the great elephants of Canada, Alaska and Siberia survived until the very final stages of geological history to be buried in the permafrost which concludes geological deposition in those areas? For that matter, how can the flood geologist continue in his position after examining the archaeological evidence that man and extinct mammals lived together on our continent and were buried together in the conclusion of geological history, in the debris of an icy catastrophe? How indeed is it possible that man's fossils almost exclusively are found in the topmost layers of geological debris?

The view that the Noahic flood caused the Tertiary and Quaternary deposits of the Cenozoic (or that such deposits cannot be differentiated) is faced with the exceedingly difficult problem of the migration of man and mammals to the isolated continental blocks in the short span of time since the flood. This could not be much more than 4500 to 5000 years. The old theory of land bridges across the Atlantic was quite useful to the creationist who desired a means for

man to migrate from Babel to the various continents. However, this utterly has been disproven by the research of the Glomar Challenger. An exception is the Siverian-Alaskan bridge. The Leni-Lenape legend to which I have referred earlier supports such a migration from Siberia. Perhaps Australia is another exception. Otherwise, as I have pointed out in the Bible-Science Newsletter (Dec, 1977), intercontinental migration had to be accomplished in some other way.

The Paleozoic Fossils

But my purpose in this discussion is to show that the flood deposits (the Paleozoic debris) gives testimony to continental division. How is this?

An examination of the deposits called Paleozoic by the geologists will demonstrate that often these universal flood layers still lie level after the manner in which they were deposited in many parts of the world. More often, however, they have been elevated thousands of feet from their original position at the time of deposition. Very frequently in areas violently disturbed by continental movement they are inclined in every direction and even overturned. The Alps form a clear example.

Now it is the violently buried, widespread masses of fossils of bottom sea life which enable creationists to recognize the beginning of the Noahic flood. We must not discard this important key to understanding. The violence of the Noahic flood began when God broke open the fountains of the great deep (Genesis 7:11). The transition between the Precambrian layers and the initiation of the Noahic flood is obvious in many parts of the world. The contrast is dramatic. Many phyla are fossilized for the first time. There is worldwide similarity of fossils because of the nature of their burial in the muds of the ocean bottom as the flood began.

The present locations where these flood fossils are found will demonstrate that major mountain building and continental rifting has taken place since their deposition. I have mentioned in the December, 1977 Bible-Science Newsletter that the Paleozoic deposits in Africa and South America, as well as in Europe and in North America, have been rifted apart by post-flood continental division. The fossils which lie in the Paleozoic deposits of the East Coast of the United States are comparable to the Paleozoic fossils along the West Coast of Europe. The same is true in Africa and South America. Now if the flood theorist were right, we could only expect a continuous deposit series from Europe on the Continent, down the continental shelves, across the Atlantic, up the eastern continental shelf of the United States and on the the continental platform. Totally unexplainable to the flood geologist is that which is actually found. Patrick Hurley announced in Scientific American (April, 1968), that the nearly bare ocean bottoms were a great problem to the uniformitarian. He says: "The topography of the ocean floors has been rapidly revealed in the past decades by the sonic depth recorder ... the layers of sediment on the sea floor have also been explored by such methods as setting explosive charges in the water and recording the echoes. It became a great puzzle how in the total span of the earth's history only a thin veneer of sediment had been laid down. The deposition rate measured today would extend the process of sedimentation back to about Cretaceous times, of 100 to 200 million years, compared with a continental and oceanic history that goes back at least 3,000 million years. How could three-quarters of the earth's surface be wiped clean of sediment in the last 5% of terrestrial time?"

Ignoring the errors of the geological time, let us ask ourselves the same question. How could the great Atlantic ocean bottom be stripped of the vast Paleozoic flood layers in a matter of 5000 years since the Noahic flood? Why is it that the deep ocean bottoms primarily are covered only with materials that are chiefly marine organics in their origins? Great deposits of calcaerous, foraminifera ooze lie on the bare bottoms. These lived in the upper layers of the

sea and upon death, filtered down into the deeper basins. In very deep sea basins the high carbon dioxide content dissolves the shells before they are deposited on the bottom. Only a red clay remains. Also found are great quantities of siliceous deposits of radiolaria. Another contributor to the siliceous ooze is the diatoms. These microscopic skeletons also filtered down from the shallow water where they lived to their present resting place on the barren ocean bottom.

The Atlantic ocean bottom is not in any way comparable to the material which makes up the continents. In practically every part of the world the continents largely expose vast sedimentary deposits. The Atlantic bottom is newly-formed basalt. On the other hand, these deep sea fossil deposits of microscopic marine creatures rarely appear in the thick series of sedimentary marine deposits that so consistently cover the bedrock of the continents of the world. Their presence on the bedrock of the Atlantic is convincing evidence that the Atlantic floor never existed as continental material.

Many estimates have been made by geologists on the age of the microscopic deposits of foranifera and diatom deposits. They are based upon uniformitarian assumptions formed from current deposition rates. I believe that these microscopic plants and creatures of the sea reproduced at a much higher rate during the time when the continents were rifting and new ocean bottom was being formed continually. The concentration of silicas along the hot, spreading mid-Atlantic rift would have given an ideal environment for the rapid multiplication of the silica-collecting plants and creatures. And the fact is scarcely escapable that continental rifting well after the Noahic flood alone can explain the barrenness of the Atlantic Ocean bottom and the absent Precambrian and Paleozoic layers.

An examination of the Paleozoic materials on the continents is no less significant evidence supporting continental division. The Paleozoic and older strata on the East Coast of the United States have been crushed and crumpled so drastically that they now lie in folded waves for many dozens of miles to the west. The coal deposits of Pennsylvania are, I believe, the rafted vegetation beds of the Noahic flood. These, having grounded as the flood began its retreat, have been buckled and compressed extensively by continental movement after their deposition. It is possible that there was a minor collision between Europe and the Northeastern United States shoreline after rifting had begun. This would account for the folded Paleozoic layers along the East Coast.

The Central States and Great Plains of the United States have the best exhibit of Noahic flood layers lying in undisturbed sequence. It is fascinating to examine the ends of these strata sequences where they are upended by the Colorado Rockies. I have examined the roots of these formations extensively in the area of Denver and less carefully on the western slope. Noahic flood debris, including important coal layers, lie more than 1000 feet deep beneath Denver prairie, yet they bend upward and come to the surface as one approaches Denver and Front Range of the Rockies.

These marine sedimentary layers from the later part of the Noahic flood and, indeed, the early retreat layers of the Mesozoic, lie like shingles against the younger Colorado Rockies. The ends of these layers have been eroded away by precipitation and ice erosion which came out of the Colorado Rockies well after the flood. However, these Noahic flood deposits can be traced on westward in the Rockies. There they have been lifted up to over 12,000 feet in many places. They are by no means continuous there for the shattering uplift of the Rockies, the product of continental division, has fragmented these layers. Marine shell life can be found tipped in every direction at elevations impossible for the Noahic flood to have reached. The oceans today would be less than 9000 feet deep on a smooth earth. But of course, it was

not necessary for the flood to cover the Colorado Rockies at their present height. Indeed, they are entirely a post-flood development.

The same is true in the Sierra Nevada Range. I have traced Paleozoic and Mesozoic strata along the western foothills of the Sierras. These have been proven by deep wells to pass underneath the Great Valley of California. They are bent upward to the east as they come into contact with the younger Sierra Nevada intrusions. Here again the fossil life contained in the Paleozoic and Mesozoic layers clearly testify to the flood environment and its retreats before the Sierras were built. Here also I have found Paleozoic sea bottom deposits scattered in broken fragments at 9000 to 12,000 feet high in the Sierras. They are broken, tilted and uplifted by the great granite intrusion of the Sierras. This happened during Cenozoic times. The uplift warps all older formations which are visible at the surface on the east side of the Great Valley. Volcanoes are found throughout these mountains, volcanoes that built their ejecta cones on top of the Sierra Nevada range only after the Paleozoic materials had been broken, uplifted and eroded by the post-flood continental movement. These Noahic flood deposits on top of the Sierras are called *pendant formations* because they are perched on top of the great intrusive mass. They are by no means in the environment in which they were deposited. The flood fossils in these pendant formations speak eloquently of post-flood continental division.

Precisely the same thing is found in the Canadian Rockies. In fact, all of the Northern Rockies and the Canadian Rockies contain vast blocks of Precambrian (pre-Adamic flood) and Paleozoic (Noahic flood) materials. These are shattered and tilted at unbelievable angles by the vast horizontal and vertical forces of post-flood continental division. The fossils contained in the Precambrian materials are largely algae colonies. These algae clumps also are found in materials of corresponding environment and age in the Grand Canyon's later Precambrian materials.

The early Paleozoic materials which lie unconformably on top of these Precambrian layers in the Grand Canyon are unmistakably the bottom life forms which were deposited in the earlier stages of the Noahic flood. These are elevated to more than 3500 feet above sea level in the Grand Canyon. In the Canadian Rockies these Precambrian and Paleozoic materials both are elevated together in broken fragments to great heights. Often they are partially covered by extensive eruptive volcanic materials and then glaciated by the great streams of ice that coursed down these mountains well after continental division had reached its climax.

What is the testimony of the Noahic flood fossils concerning the event series which had followed their deposition? It is obvious that the Noahic flood retreated over a long period of time. During the period, gigantic uplifts and lateral movements crushed and distorted the Paleozoic materials all over the world. But this story is told more clearly by the fossils of the Mesozoic deposits and to these we now turn.

The Mesozoic Fossils

The testimony of the fossils that were laid down during the long retreat of the Noahic flood is quite clear and explicit. During the long retreat of the Noahic flood the shoreline of the sea lay well to the North in southern United States. At one times the shoreline crossed central Texas near Dallas and Fort Worth. The shoreline fossil life in that area remarkably testifies to the presence of a shallow, agitated sea that remained in this area for years and possibly centuries. I have seen many beds of shell life more than 50 feet thick, deposited by strong tidal activity in that period when the continent was slowly erecting and moving westward. The choice fossil which I found on that ancient shoreline was a giant Ammonite shell on the banks of Lake Whitney. It was more than 3 feet across. I believe that this floating creature had been grounded on the shoreline by the oscillating waves of the post-flood retreat.

In New Mexico and Arizona the retreat and return of these waves produced whole formations of shoreline mud debris in which dinosaur fossils are found. This slow retreat of the shoreline is recorded in the late Cretaceous formations that have been designated "Fruitland, Kirtland," and others. Farther north the retreat occurred earlier in the Triassic and Jurassic sections of the Mesozoic, although tidal invasions continued to reinvade the territory repeatedly as described in Genesis 8:3. "And the waters [repeatedly] returned from off the earth, going and returning [over and over again]."

Evidence may be found in many places suggesting that the dinosaurs often were borne far inland on the shallow profile of the land mass by the tidal waves generated during the retreat of the flood. The ocean bottoms evidently were deepening during this time. This must have been caused by the initial, hesitant stages of continental division.

As continental division began in earnest in Peleg's days (Gen. 10:25), perhaps several centuries after the flood, tidal activity became much stronger. I conclude that the alternation of great wind beds and tidal wave materials such as those found in Dinosaur National Park may have been laid down as much as 400 to 500 years after the Noahic flood. I believe that the concentration of dinosaurs at Dinosaur National Park indicates that these great creatures had been swept onto the shallow profile of the land mass by tsunami, tidal waves generated by earth movement. Stranded after the retreat of these waves, they found a water hole in this area and collected there until they died. They are buried in the Morrison formation, a material which is made up of colorful marine muds of a later tidal wave which probably swept in over the continent from the northwest. This was, of course, before the Uinta Mountains were erected to the north and before any of the mountains of the Sierra Nevadas and of the North-western Rockies were formed by continental division pressures.

The relationship of the Noahic flood strata to the retreat of flood strata at Dinosaur National Park is quite obvious. It underlies the whole park. The Paleozoic materials can be examined from Harper's Corner high on the northern side of Green Mountain. The Green River cuts its way through these in the center of the great anticline on its journey south to the Colorado River and to the Grand Canyon. The dinosaur-bearing Mesozoic material once overlay this entire area. They now stand at approximately a 45° angle on the southern side of the anticline which forms Split Rock Mountain and the shattered mountain to the east. On either side of this anticline the Mesozoic formations may be found. On the north side they dip down to the north: on the south side they dip down to the south. The tops of the mountains have been eroded away to expose the formations like giant shingles. This is why we can see the dinosaur material in the Morrison formation. These same formations lie like inverted shingles on the southern and on the northern sides of the much larger Uinta range just to the northwest. Here, too, I have found overlying the universal flood formations the same alternating beds of wind-blown sands of Genesis 8:1. They begin in the late Paleozoic deposits just as at the Grand Canyon and then later are followed with Mesozoic tidal wave and alternating wind materials. The forces generated by continental division are brought abruptly home to the researcher in the area of Sheep Creek Canyon north of Flaming River Gorge in Utah. Here Noahic flood materials stand not only vertical but are distorted even beyond the vertical. Just down the canyon, hundreds of feet below this giant upward fold of flood materials is a great bed of wind-driven sand dunes which once overlay them before they were distorted by continental movement.

How can anyone say that the continents have not moved after the Noahic flood? The fossils clearly testify to such a movement and they cannot be ignored. Should they be denied their testimony? Late Mesozoic deposits also bring a fascinating testimony. I will limit my discussion to the dinosaurs of the Red Deer River basin in Alberta. Here we are considering an area

100 miles east of Calgary. It is an area which, by fossil content, was a shallow sea basin. The shells of clams and oysters are common. The most important fossil material in the area is the very extensive skeletal material of several different dinosaurs. When I led a Bible Science geology field trip there ten years ago we hiked all over the Dinosaur Provincial Park with a young geology student for a guide. I observed enough skeletal material to convince me that there were several hundreds of dinosaurs buried in this one area. This deposit extends at least a hundred miles up the river to the northwest as well. Now the dinosaurs of the Alberta bed testify explicitly concerning continental division. They are buried in the sands of the shallow post-flood Alberta sea that are mingled with hundreds of feet of aerial volcanic ash. This roared out of giant volcanoes more than 100 miles to the west and southwest. These volcanoes are a direct result of continental division. They erected themselves in and on top of the broken and shattered Paleozoic (and earlier) materials. Thus they post-date the two universal floods that had deposited those materials.

I have already mentioned the great uplifts of Noahic flood blocks which may be found in the Canadian Rockies to the west. This giant fracturing, uplift and volcanic eruption of the Canadian Rockies can only be the result of continental movement long after the flood. The dinosaurs which had survived in the shallow Alberta basin until perhaps 500 to 1000 years after the flood were buried in the violent subaerial volcanic eruptive materials of that continental movement. The area finally was covered with many feet of sand, gravel and rock by the post-flood Cenozoic ice sheet that followed. There is no way possible that these Mesozoic fossils and Cenozoic fossils which overlie them can be manipulated to make them fit in either monocatastrophist flood explanation.

The Cenozoic Fossils

The testimony of the Cenozoic materials is just as explicit. It would require a book to present all of the evidence from this post-flood period of earth's history. The Cenozoic deposits, to the geologist, appear to cover a period of 70,000,000 years. But the geologist is misunderstanding the catastrophic nature of continental division and the abruptness of the great post-flood event. It is during this period of time that continental movement produced all of the great mountains of the world.

I have mentioned the uplift of the Canadian Rockies in connection with Mesozoic times. However, I believe that the transition between Mesozoic time and Cenozoic time was very, very abrupt, and that this violent crushing, folding and uplifting process continued over an extended period of time. The presence of the ash beds in the Alberta basin give convincing evidence that volcanoes already were roaring in western Alberta as late Mesozoic or Cretaceous time was closing. This violence continued throughout most of Cenozoic time. Man had begun his migration from the Tower of Babel long before Cretaceous time. His tracks are found with the dinosaurs of central Texas in the Glen Rose formation. I have found the chips of his flint tools around his camp fire in the dry sand dunes on what was the eastern edge of the great fossil Uinta Lake. This had been formed after the uplift of the Uinta Mountains. Later these waters poured southwest to join the Colorado and to carve the Grand Canyon. The early human inhabitants of our continent also settled along the shores of the great lake that filled Death Valley after the Sierra Nevadas were erected. Their early camp sites have been found there also. The same is true at old Lake Bonneville, now Great Salt Lake. In the southwest man frequently moved into overhanging caves when they migrated into an area. I believe this was partially for protection from the weather for I believe that continental division resulted in the violent weather of the so-called "Ice Age" after the flood. As the period of cold and great humidity gradually changed and the southwest dried out, man moved away

from places like Mesa Verde to his present dwelling places along the rivers and in the valleys of the southwest.

That there was an ice catastrophe at all is a matter which many believers still dispute. They would prefer to identify the grinding, scouring and polish left by the great ice sheets that invaded our northern hemisphere as scars of the Noahic flood. Nothing could be farther from the truth nor more unrelated to a scientific investigation of the field evidence. Somewhere around 750 to 1000 years after the flood, continental division had so filled the atmosphere with volcanic dust and ash like that which buried the dinosaurs in Alberta that the sun no longer was able to penetrate the atmosphere effectively. Temperatures began to drop rapidly throughout the whole world. Scientific records show that the eruption of the one volcano, Kraatoa, in the nineteenth century dropped the earth's temperatures measurably for two years. The same is true of the great volcanic explosive series that took place in Alaska in 1912. Scientists have estimated that, for a time, 20% of the solar energy that normally enters our atmosphere was reflected. It simply could not penetrate the great atmospheric layers of ash, dust and steam. Similarly studies of the oxygen content of successive layers of shell fossils in the ocean bottoms have demonstrated that temperatures dropped steadily from late Mesozoic times (after continental rifting began) until earth was gripped by the icy storms of Pleistocene times.

Imagine what it must have been like to live on earth when thousands of volcanoes were pouring their steam and ash into the atmosphere! The albedo or reflectivity of the earth changed drastically. The sun's light began to bounce off. Beneath the great layers of clouds and ashes that filled our atmosphere, temperatures began to plunge downward. An ice age was triggered which probably lasted several hundred years. Indeed, the ultimate effects of it still have not retreated, for Antarctica and Greenland both have more than 11,000 feet of ice pressing them downward below the surface of the sea in some areas

There is much fossil evidence, both archaeological and traditional, that man was here on our continent while this took place. The Leni-Lenape legend quoted earlier in this discussion shows what migration over the Bering Sea was like in those terrifying days. The Okanagaus Indian legend quoted earlier probably tells of another migration route and of the difficulty of surviving those trying days of continental division.

The Pima Indians describe what it was like to live on this continent when giant tidal waves were still troubling the land mass and its population.

“Then in the twinkling of an eye there came a peal of thunder and an awful crash, and a green mound of water reared itself over the plain. It seemed to stand upright for a second, then, cut incessantly by the lightning goaded on like a great beast, it flung itself upon the prophet's hut. When the morning broke there was nothing to be seen alive but one man if indeed himself by floating on a ball of gum or resin.”

We must never forget that man himself is a living fossil. Our ancestors lived before the cataclysm, the Noahic flood. They also lived through the catastrophes of continental division and the consequent ice “age.” In a real sense, man simply is one of the fossils who has, in his own verbal and written history, preserved for us many things which the fossils of plants and animals could not say as openly. Together, all bring a united testimony concerning continental division after the flood.

We have not yet considered the most startling “fossil” evidence that convincingly demands believers to recognize a post-flood, post-continental division icy catastrophe. It is the oldest book of the Bible, the Book of Job. I conclude that Job was written during the “ice age” in the third millennium B.C. or slightly before. I tentatively propose that it was written by Jobab

and that this last son of Joktan, brother of Peleg was Job, born in the second generation after the earth was divided at the time of Peleg's birth (Gen. 10:25–29). At any rate, the book of Job is packed with references to violent catastrophes of diastrophism, climate and marine disturbances. Mountains are being overturned, valleys rifted open and rivers excavating their beds. There are more mentions of wind, rain, hail, snow, freezing and of the miseries caused by these than can be found in all of the Bible. Strange indeed are the repeated references in Job to the sea and to tidal catastrophes!

I have defined a "fossil" as a living creature or thing which, by some near miraculous means, has been preserved so that its original form can be to some extent visualized by a trained eye. Surely the term well fits the supernaturally preserved comments of Job and his friends on the trials of life during the period of continental rifting and of the consequent "ice age!" How appropriate that the sons of cave dwellers should tell us what that time was like! (Job 30:1–15).

Fossil Magnetism

There is one other type of fossil that should be mentioned for it gives evidence of continental movement after the flood. That is the fossil magnetism which is preserved in the ocean bottom. In the middle 1960s, scientists studying the ocean bottom began to recognize that there were definite patterns of reversal of the earth's polarity in geological history. Then they discovered that the ocean's bottom on either side of the mid-Atlantic ridge was just like a tape recorder. A ship-borne magnetometer was capable of picking up the magnetized stripes of polar reversals as one moved to the east or the west of the mid-Atlantic ridge. Only one conclusion seemed to fit the data. The mid-Atlantic ridge was formed from hot magma as the Continental plates were spreading apart. Of course this was interpreted in a macrochronological framework. Nevertheless, they discovered that the ocean bottom had tape recorded reversals of magnetism in the earth's crust, and that is definitely shows that movement had been taking place during the earth's history. I reject totally the chronology of the historical geologist in his interpretation of this magnetic fossil data. However, I do not believe that we should reject the data itself. This is another fossil which gives testimony concerning continental division. Actually the continents themselves are fossil magnet records of past movement. Every lava flow contains iron particles. As the lava cooled, these indicate where the poles of the earth were in relation to their position. Fascinating!

It is my conclusion that the fossil data, so briefly and fragmentarily examined in this study, presents a harmonious and clear message that the continents did indeed divide sometime after the Noahic flood. Nothing is more sorely needed in creationist circles today than the determination to do research on this subject, unless it be the finances needed to conduct this type of research. I am confident that there is only one way that we creationists can ever achieve significant victories in our struggle against scientific unbelief. It is to examine carefully the scientist's evidence in the conclusions, and to unveil the true testimony of the fossils concerning earth's history and their Creator.