MONOGLACIOLOGY AND THE GLOBAL FLOOD

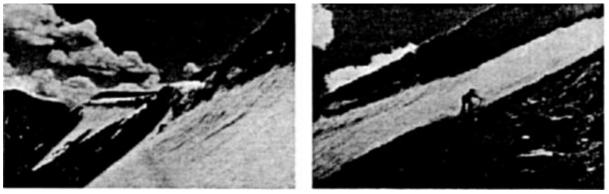
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Scientific data affirming the Genesis account of a global flood have been increasing in recent years. There is likewise evidence for a serious reappraisal of the classic views on glaciation in the Northern Hemispheres. There is the need to reconsider the earlier and older views of the monoglacologists. Such views are quite favorable to the concept of a world wide deluge.

The Ice Age, scientifically termed Pleistocene or Quarternary, was the last geological epoch and the most carefully studied time of continental glaciation. Its express nature, causes, and duration are crucial factors for postulating one or several glaciations, and for the evidence supporting the global flood.

Although monoglacialogists postulate continental ice caps, the ice caps are thought to have been much smaller in extent and to have been accompanied by marine transgression, floating ice and other fluvatile elements. Like polyglaciologists, monoglaciologists adhere to the belief that the ice disappeared about 8-10,000 years ago. But unlike polyglaciologists, monoglaciologists hold to a drastically shorter period of glaciation.

This paper will deal primarily with the Pleistocene period of time. The weaknesses of classic polyglaciology and the increasing plausibility of once discarded monoglaciology will be considered in detail. The conduciveness of the theory of monoglaciology to the Biblical revelation of a world wide flood will be shown.



Editor's Note: Glacial masses of ice and snow occur in high mountain areas such as this near Interstate-70 at Loveland Pass in the Colorado Rockies. There is strong evidence suggesting that in times past vast sheets of glacial ice covered major portions of eastern North America. In this interesting paper, Mr. William Springstead presents a strong argument favoring only one ice advance instead of several. (Photos by George F. Howe)

Specialists in the study of Pleistocene evidences frequently acknowledge numerous difficulties in explaining the causes, sequences and times of the age. Sparks thus writes: "One of the greatest problems in natural science."¹ Kraus: "A most difficult and controversial one."² Howells: "A difficult science."³ Wells and Kirkaldy: "They bristle with unsolved difficulties."⁴ Daly: "Ten major mysteries for every one solved."⁵

Reeves, Jr., outlines the generally held views of the age thus: "Division of the Pleistocene in all areas of the world has long been based on four major periods of glacial advance, each separated by a major interglacial period."⁶ Using the tool of uniformitarianism (the extrapolation of present process rates into the past), geologists have generally postulated four periods of slowly growing and declining continental ice caps, interspersed with even lengthier intervals of warmth.

The Penck Bruccner terminology for these ice ages, based on a study of Swiss Alpine glaciation, has been widely used for classifying glaciation elsewhere. Such procedure is quite commonly used in hypothesizing geological processes in various places. There are however inherent dangers in this type of theorizing without verification from thorough geological fieldwork and consequent correlation.

Oakley has recently warned: "The use of Penck Bruccner terminology for Pleistocene deposits outside the Alpine regions has proved difficult, and attempts to apply it throughout the world on the basis of inadequate evidence of correlation have probably actually hindered the progress of Pleistocene geology."⁷ Professor Emiliani has lucidly pointed out: "The notion that there were four glaciations has such great classic fascination that it will not die easily."⁸

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Yet there is virtually no unanimity among the specialists as to the number of glaciations, what caused them, and how long they were in duration. Differences over such matters have indeed caused such widespread age computations as those of 3,000,000 years; 2,000,000 years; 1,000,000 years; 600,000 years; 500,000 years; 300,000 years; 250,000 years; 100,000 years; and less. It should be objectively noted that the duration of time decreases with the number of glaciations postulated.

Ericson and Wollin write: "Unfortunately, students of Pleistocene disagree as to the number of continental glaciations which occurred during the Pleistocene. Consequently there is no unanimity regarding the lower stratigraphical boundary even in glaciated regions."⁹ Eisley notes: "The glaciations are constantly being reassessed as to time and number."¹⁰ Soviet scientists "think that the Quarternery system covers so short a time and is so incomplete that it should not be subdivided into four series or stages."¹¹

I. Dating of Events in the Ice Age

Primary bases for interpreting the last age have been such features as: amount of sedimentation; conjectured thickness of the ice; evidence of glacial movement in lowlands; faunal and floral association; evidence of climatological change; the presence of human fossils and artifacts; radio active dating, etc. Yet none of these have proven very satisfactory to students of the Pleistocene.

The recency of the Pleistocene (some students believe it is still going on) has posed problems for specialists in historical geology. Russell has written: "Paleontology offers little help because there is nothing really distinguishing to separate late Pleistocene from recent faunas."¹² Sparks notes: "It cannot be solved by geological methods alone, as there are not fossils of sufficiently wide range and sufficiently restricted to certain horizons to act as zone fossils."¹³ Johnson says of paleontologists: "Their competances are not with Pleistocene, material but with that of the Pre-Pleistocene,"¹⁴ Zeuner writes: "In the Pleistocene, however, this paleontological method of dating meets with a very limited success."¹⁵

One reads in popular treatments of the age, about ice being a mile thick over New England and elsewhere. This is somewhat speculative. Bowen has candidly said: "The extent of Pleistocene age is uncertain because, although its real occurrence is fairly well known, its thickness is a matter of conjecture. . . . "¹⁶

Oakley has pointed out: "The commonly accepted durations of the Miocene, Pliocene and Pleistocene periods (20, 15, and 1 million years respectively) have been estimated mainly on the basis of relative maximum thicknesses of the strata."¹⁷ Yet Osborne has recently noted: "Most authors have abandoned all hope of using stratigraphic data to define time units. The thickness of a sediment is no parameter of geologic time unless more reliable data are obtained concerning rules of deposition."¹⁸ The question then rises, how much dating is postulated upon unproven rates of deposition?

Attempts at dating according to animal or plant association have also run into real problems. The French archaeologist Pradenne has been quoted as saying: "The difficulties are such that after fifty years of study to which the greatest geologists have devoted all their energies, there is no certainty yet as to the exact number of glaciations and the way in which faunal changes are related to them."¹⁹ Sauer has cautioned: "The appearance or disappearance, increase or decrease, of particular plants and animals may not spell out obligatory change, as has been so freely inferred."²⁰ Flint states: "The mammals like the plants have undergone little change throughout Pleistocene time, which appears to have been too short for conspicuous evolution to have occurred."²¹ Hole and Heizer state: "Dating by means of faunal association is thus_inexact and may at times be very misleading."

And Rankama writes in his introduction: "It seems likely then, that climate will continue to be an important, if not the chief means of subdividing both the continental and marine Quarternary."²³ Dreaminis writes: "Climate has to be considered as the most important factor in Pleistocene stratigraphy and correlations."²⁴

Notwithstanding its importance, there is again no unanimity as to the express climate of the age. Reeves, Jr., points out: "A great deal of controversy exists as to whether the glacial periods were actually colder and wetter than the interglacial periods (Charlesworth, 1957, Quinn, 1966)."²⁵ Ewing and Donn, in contrast to other students, propound: ". . . The idea of an icefree Arctic during the Wisconsin time and hence during earlier glacial stages."²⁶ Stokes writes: "The Pleistocene, then may have been a period of sharper contrasts of climate and of shifting climates rather than a period of great cold."²⁷

No stratification exists as indisputible proof of the proposed eight periods for the Pleistocene. In fact Koenigswald has taken all of the earth's history into his observation: "No continuous stratum was ever laid down over any part of the earth,"²⁸ Of the Pleistocene, Dreaminis writes: "To the best of the author's knowledge, there is no single geological section in the classical Midwest or any other glaciated area where a complete record of the eight Pleistocene ages have been preserved."²⁹ Emiliani writes: These sediments (continental) are always discontinuous and nowhere represent more (than) one or two glaciations, with only one or two interglacial deposits sandwiched between. For about a hundred years, geologists have been trying to reconstruct the history of the Pleistocene from this very fragmentary evidence.³⁰

In order to account for this noticeable lack of field evidence, geologists have resorted to the assumption that the last glaciation (Wisconsin) wiped out the previous evidences. Dreaminis writes: "Each glacial advance wiped out most of the sediments of the previous glacial and inter glacial ages."³¹ Ericson and Wollin similarly state: "Each succeeding glaciation has tended to obliterate or seriously disarrange the deposits and traces of all other glaciations."³²

Yet there is admitted reference to insufficient evidence for the existence of these preceding sequences. Wolfe thus writes: "The oldest of the glacial stages is the Nebraskan, its record is rather obscure, and the remnant of its drift deposits are few and small."³³ Deevy writes: "It is particularly puzzling that fossils of Yarmouth age are almost unknown. These facts may mean that the widely accepted division of the Pleistocene into four glacial and three interglacial stages is based on incorrect pre-conceptions."³⁴

The last glaciation is being considered more and more to have been equal to, if not greater than, the previous three. Bowen observes: "Antev's conclusions drawn from very different data that the last glaciation, the Wisconsin, was as great as any of the others, or even greater."³⁵ Millward notes: "The last great ice period, coincident with the Wurm in central Europe or the Wisconsin in North America, is now thought by Scandinavian geologists to have been more extensive than it seemed to earlier workers."³⁶

The dynamic effects of this last glaciation are also being noted. Megitt thus writes: ". . . The climatic changes of the late Pleistocene and early Holocene, changes which greatly affected the flora and fauna of Europe."³⁷ Oakley writes: "The fauna of Europe suffered much greater damage in the course of the Wurm glaciation than during the two preceding ones."³⁸ Kowalski notes: "The Wurm glaciation brought a great extension of the Scandinavian ice sheet and the total destruction of fauna of northern Europe."³⁹

The quick advance of the last ice sheets is also noted. Higgs writes: "A climatic change, however, was not necessarily a slow process for in the Mankata advance the ice came so fast it overrode the living forest."⁴⁰ This Mankata substage of the Wisconsin is thought by uniformitarians themselves to have occurred only 11,000 years ago.

II. Significance of Monoglaciology Theory

In a geological treatise on Minnesota the following appears, which is pertinent to the history of glaciology: "For a long time after the existence of continental glaciers in North America had been clearly established, geologists believed that there had been one single glacial period, followed by a definite retreat of the ice."⁴¹ Geologists who believed in only one glaciation are called *monoglacialogists*.

Monoglacialogists have been numerous in both England and in North America, and a few may be found in France today. The late glacialist Richard J. Lougee was a proponent of monoglaciology. His abstract on "Ice Age History" in *Science*, Vol. 128, Nov. 21, 1958, pp. 1290, 1292 should be read.

Among the numerous scientists who have espoused monoglaciation, was a noted Canadian named Sir J. William Dawson. Milne and Milne have labeled him "the distinguished botanist."⁴² Sir Dawson was a brilliant contemporary of Sir Charles Lyell, and the two did some field work in Canada together.

Dawson's views on the Ice Age deserve modern reconsideration. He wrote:

In short we arrive at the conclusion that there has never been a continental glacier properly so called, but that in the extreme Glacial period there has been great centers of snow and glacial action, . . . while the lower lands have either submerged, or enjoying a climate habitable by hardy animals and plants.⁴³ . . . The writer and those with whom he has acted in this matter, have never held that icebergs alone, or fields of ice alone have produced the Pleistocene deposits. Their contention has been that the period was one in which glaciers, icebergs, and field ice acted together, and along with aqueous agencies in producing the complicated formations of this remarkable age.⁴⁴

And in a 1963 treatise edited by Sims: "Recent studies have led some geologists to conclude that the glaciers originated as mountain glaciers in the highlands of Baffin Land, Labrador, and Quebec."⁴⁵ Andrist also notes:

Contrary to popular belief, the ice did not form around the North Pole and then flow southward. It formed in a number of glaciers —Canada, Greenland, Northern Europe, . . . more or less simultaneously, and spread from each of these places. Nor was the glacial epoch a period of unusual cold; the essential for glacier formation is only that more snow fall during the winter than melts in summer.⁴⁶

Dawson's observation of "great centers of snow and glacial action" are now being reaffirmed.

The express nature of the Pleistocene phenomena are mentioned. Bird writes: "The Pleistocene was not solely a glacial period, and glaciations and the marine transgressions that followed modified the scenery more than the interglacial processes."⁴⁷ Flint has written of Arctic Canada: "Many of the striations. within the submerged area may have been made by floating ice. Hence the broad problem of glacier ice movement in that region is still unsettled."⁴⁸ Clark and Stearn note: "When the Pleistocene was an epoch of glaciation in higher latitudes, in the low and middle latitudes, it was a stormy time of increased rainfall."⁴⁹ Bird writes also: "West of Hudson Bay, Pleistocene marine transgression was greater than anywhere else in North America. On the mainland the sea reached a depth of 200 - 400 and 500 - 600 feet on the islands north of Hudson Bay."⁵⁰

The present Canadian Sea (which includes Hudson Bay) extends for about 1300 miles from north to south and is nearly 600 miles wide. Farley Mowatt points out: "The sea has shrunk by something like half its area during the past ten thousand years; its coastal plains for as much as two hundred miles inland clearly shows that they were formerly sea bottom."⁵¹ Gignoux writes of the former Great Lakes region: "Traces of the old shores are progressively to the north, where they are found at a maximum altitude of 500 feet above Hudson Bay."⁵² Dawson's description of "glaciers, icebergs and field ice . . . along with aqueous agencies" begins to take on more significance.

And Stirton observes: "The ages of different water levels in these Pleistocene lakes have not yet been correlated with glacial advances, but the time of their maximum extent was probably Wisconsin."⁵³ He thus postulates the possibility of Pleistocene lakes along with the glaciation of the Wisconsin period. In addition, Ewing and Donn note: "There is a considerable amount of evidence which suggests strongly that pluvial and glacial conditions occurred simultaneously."⁵⁴

One of the large Pleistocene lakes was Lahontan. Wyckoff informs us that Lahontan "drowned about 8,000 miles of Nevada, California and Oregon to a depth of at least 500 feet."⁵⁵ Farb notes that Lake Bonneville: ". . . was an enormous inland sea that covered most of Western Utah, Eastern Nevada and Southern Idaho . . ."⁵⁶ Sanderson states that it was once "350 miles long and 150 miles wide and some 1000 feet deep."⁵⁷ Bertin states: "In North Dakota, Minnesota, Manitoba and Saskatchewan a vast lake, Lake Agassiz, covered 110,000 square miles."⁵⁸

If, as seems possible, the glaciation, marine transgression, and enlargement of the fresh water lakes were synchronous, the areas covered by fluvatile elements were enormous indeed. One is reminded of Platt's statement concerning the Mississippi river valley: "The sides of the original valley are gravel terraces up to 200 feet above the flood plain. They show the high water mark of the last floods of the Ice Age. Such a flood staggers the imagination."⁵⁹ Gleason and Cronquist note: "The coastal plain province is undoubtedly the youngest in the United States. . . . The present lands of the coast plain along the Atlantic Ocean and the Gulf of Mexico were only recently, geologically speaking, still under water. A good share of the coastal plain is even today submerged."⁶⁰

Dawson wrote of the Ice Age: "Submergences and emergences of land in the glacial age were more rapid than has hitherto been supposed."⁶¹ Broecker has written: "There is little doubt that 11,000 years ago marks the midpoint of a rapid transition from glacial to interglacial condition."⁶² Clark and Piggot note: "The end of the Pleistocene Ice Age seems to have been as sudden as the thawing of a frozen pond. Its date can already be fixed to within a few hundred years."⁶³ Cullen refers to "an exceptionally rapid rise in sea level between 11,000 and 9,000 years B.P."⁶⁴ Later he says: "Many times more rapid than the immediately preceding."⁶⁵ Braidwood notes that Professor Garrod is "much impressed with the speed of the changes during the later phases of the last glaciation, and its probable consequences,"⁶⁶

Nor is there reason for uniformitarian geologists to hastily reject the concept of a rapidity of ice melt. Cowen, for example, notes: "The Arctic Sea ice has shrunk 12% in total area in the past 15 years and now averages 6 feet thick."⁶⁷ He then observes: "That is about half as thick as it was in the late nineteenth century."⁶⁸ Sanderson gives us another striking example of glacial melt in Alaska:

The fact that fifty miles of solid ice three thousand feet deep can completely vanish in a little over a hundred years, and then vast glaciers that once formed large parts of them retreat another ten miles or more over land in a further century should make us reappraise our ideas about ice caps and so-called ice ages.⁶⁹

The present thus affords us the plausibility of rapid ice melt in the past.

Of the end of the ice age Dawson said: "Knowing as we do that the culmination of the glacial age may have occurred less than 10,000 years ago . . ."⁷⁰ Platt writes: "The lobe of the big ice left the Minneapolis area 7,800 years ago."⁷¹ Bird writes: "The post glacial period has been brief less than 10,000 years in many parts of the Arctic."⁷² While these and other dates mentioned may be too great, their obvious recent character is in keeping with Bible-based chronologies.

Then Antevs has pointed out: "Independent time estimates in North America and in Europe show that the last ice sheets in the two continents disappear at the same time."⁷³ Deevy has written of Europe: . . . Scandinavia and Britain, where post glacial events moved with some of the demoralizing swiftness of an Arctic spring-time."⁷⁴ Ardrey notes of the Wurm ice sheet: "That retreat occurred abruptly just eleven thousand years ago."⁷⁵ Dawson was again amazingly close in his interpretations.

The plausibility of the last glaciation being the one and only one fits in remarkably well with the Genesis account of a world flood. Whitcomb and Morris have written: "Glaciation was only one of the after effects of the deluge though undoubtedly the most spectacular."⁷⁶ Glaciation, with its alteration effects upon the continental shelves would allow for the return of biotic life to various parts of the world. Glacial melt would then in turn cut off these temporary land bridges. The rapidity of glaciation would account for the remarkable preservation of enormous amounts of animal remains in the Alaskan and Siberian muck beds. Sanderson writes:

This perma frost in Alaska and Siberia contains enormous quantities of animal bones and flesh, half decayed vegetation, wood, and other remains of living things that, in some areas, together constitute a sizable percentage of the whole.⁷⁷ . . . It is weird to think that one-seventh of the land surface of our earth is covered with perma frost and that about half of this (mostly in Siberia) is riddled with plant and animal remains aggregating untold millions of tons.⁷⁸

The phenomena causing the Deluge are given us in Genesis 7:11,12: "In the six hundredth year of Noah's life, in the second month, the seventeenth day of the month, the same day were all the fountains of the deep broken up, and the windows of heaven were opened." The water sources were subterranean and atmospheric. The first was the result of a breaking up of the water sources of the great deep. The second was unprecedented, continuous rainfall. Is there evidence of such phenomena occurring in the past?

Rainfall was admittedly a major factor in the glaciation ascribed to the last age. Ardrey refers to "The Pleistocene's world wide phenomenon, rain."⁷⁹ Elsewhere he notes: "The time when the weather went mad."⁸⁰ Wright and Frey point out: "The Pleistocene is characterized by its dynamic temperature, humidity and sea level changes."⁸¹ Raikes notes: "For it cannot be over emphasized that climate is a world wide phenomenon."⁸² Ericson and Wollin observe: "It is

scarcely conceivable that glaciers could spread without increase in precipitation."⁸³

Rain fell in abundance all over the world, not only in glaciated areas, but also in the great arid regions of our day. Aridity was minimal, if not non-existent during the close of the Pleistocene. Grant has noted of the Great Basin: "During the latter half of the Wisconsin glaciation, a period of heavy and widespread rains known as 'the great pluvial' created many large lakes, particularly in the Great Basin."⁸⁴ Dunbar has concluded: "There can be little wrong in interpreting the Pleistocene Ice Age as a climatic catastrophe."⁸⁵

III. Volcanism and the Ice Age

Water from the earth's interior is the first mentioned water source of the Deluge. Movius states: "From the beginning the Pleistocene was a period of climatic instability and crustal movements of considerable magnitude."⁸⁶ Ericson and Wollin state: "The Pleistocene was a time of exceptional mountain building and volcanic activity."⁸⁷ Berkner points out: "There is convincing evidence that the present atmosphere and hydrosphere arose largely from the earth's interior by volcanic emanations."⁸⁸ Williams has noted: "By far the principle gas given off by volcanoes is steam or water vapor. Seldom does it constitute less than 80% of the total discharge and generally it makes up more than 95%."⁸⁹⁹ It is now generally held that water is the trigger of volcanic eruptions.

Briggs has pointed out: "The Pacific floor has still uncounted thousands of volcanoes, called Sea Mounts, that never rose above sea level. It also has at least 1,400 that once made it to the sun and then slipped back under the water."⁹⁰ Shepard has observed: "So far as is known all the Pacific sea mounts are volcanic in origin."⁹¹ Heusser notes of the Pacific coastal area: "The late Pleistocene has been an interval during which the processes of gradation, diastrophism, and volcanism have been intensely active on this coast."⁹²

The volume of water released by a volcano is quite large. Bertin observes: "The amount of water released during an eruption is amazing. At the height of its activity Paricutin produced 16,000 tons of water daily, as well as 100,000 tons of lava."⁹³ A simultaneous volcanic eruption of dozens of volcanos could theoretically release enormous amounts of water, and so cloud the atmosphere as to lower the temperature and bring on an ice age. Sanderson has pointed out that:

The surface of the earth is covered with a series of vast cracks along which almost all the volcanos are strung; so that, if one of these cracks suddenly opens up or makes a move to close a little, a whole string of them might go off at once.⁹⁴ . . . What affects one seems to affect all, and it is now thought that from time to time the infliction may be so great that they all act in concert.⁹⁵

Kurten has noted: "Continental ice sheets seem only to form at times of intense mountain building."⁹⁶ He then says of the geological change of the Ice Ages: "This was like an explosion, a total revolution in the tempo of geological events."⁹⁷ A recent Israeli research bulletin has urged: "That the history of volcanic activity in prehistoric and historic times should again be carefully compared with the eustatic changes of the ocean levels, and the recorded climatological changes in the world."⁹⁸ Stokes has postulated: "It may be that the numerous sharp uplifts that came about in North America and other parts of the world were sufficient to insure the formation of ice fields where none had existed before."⁹⁹

IV. The Significance of a Shorter Ice Age

Dawson wrote of the ice age duration: "If we adopt the shorter estimates afforded by these facts, it will follow that the submergences and emergences of land in the Glacial ages were more rapid than has hitherto been supposed."¹⁰⁰ He also notes: "Such results would greatly shorten the duration assignable to the human period."¹⁰¹

It is quite apparent that the proponents of human evolution are absolutely dependent upon a Quarternary of lengthy duration. Eisley has querried: "Suppose that this period we have been estimating at one million years should instead have lasted a third of the time. In that case what are we to think of man?"¹⁰² Later he writes: "Such an episode, it is obvious, would involve a complete re-examination of our thinking upon the subject of human evolution."¹⁰³ Ericson and Wollin admit: "If the ice ages and the topographical change of the Pleistocene had not begun about one and a half million years ago, it is probable that our species would have failed to develop."¹⁰⁴

The ardent desire to adhere to a lengthy Ice Age has caused many students to disregard the faulty field evidence and to cling to radio-carbon and potassium argon dating as support. Yet even here, honest appraisal is by no means assured of success. Kurten has pointed out: "The main part of the Pleistocene is too young for the Uranium method and too old for the radio-carbon method."¹⁰⁵ Dreaminis writes of Canadian research: "Most of the reported potassium argon dates tend to be greater than those obtained by other isotopic methods (though on different samples)."¹⁰⁶ Cowen has written: "Radioactive dating of rocks is unreliable for intervals shorter than about 10 million years. This leaves a considerable gap from early Pliocene to late Pleistocene in which dating is largely guess work."¹⁰⁷ Beals and Hoijer note: "Many people believe the potassium argon dating method to be less reliable than either carbon 14 or radium dating."¹⁰⁸ Possibilities of contamination and the fact that radioactive dating depends on unprovable suppositions, make it an unreliable criterion for absolute dating.

For example, carbon 14 dating depends upon the stability of the oceanic level over the past. A world deluge would throw the clock out of kilter. In an article on the carbon 14 clock, Libby writes: "We have fairly good evidence that the ocean hasn't changed much, either in composition or level, in 5,000 years."¹⁰⁹ Supposing Libby is right, what about 6-10,000 years ago? Would not a major ocean rise during that time make a notable difference in such dating?

According to Genesis 8:2, the rainfall was "restrained" and the fountains of the deep "stopped" somewhere toward the middle of the global flooding. We have suggested that the continental glaciation followed the flood. How then, it may be asked, can it be postulated that the effects of the flood were also causes of glaciation?

First of all, it seems reasonable that the enormous volumes of flood water continued to have after effects on world climate. Even with the return of the waters off of the earth (Genesis 8:3-5), there still must have been a far greater amount of water in the world ocean and on the dry land. Much of this water would continue to be absorbed in the atmosphere and then released in mountain areas of the world.

Secondly, when volcanic action in the world ocean came to a halt, there may well have been subsiding of the ocean bottom. Correspondingly, it may be postulated that there was sharp mountain rise on some of the world continents, especially those in the northern hemisphere.

With the sharp rise of northern mountain ranges, along with a still pronounced rainfall (though not of previous flood proportions), continental glaciation could conceivably take place. Such glaciation was a heavy contributor to the decrease of remaining flood waters.

Regarding the time of glaciation with respect to the flood, the following suggestion is made: In Genesis 11:8-19. Scripture reveals the time element for the world wide dispersal of mankind. It would seem that the Tower of Babel incident occurred well within two centuries after the flood. Such dispersal probably coincided with the dry continental shelf land bridges made possible by continental glaciation. It would follow then that the glaciation was also within two centuries of the flood.

Conclusion

In brief conclusion then, we have associated monoglaciology with the scriptural revelation of a global flood. Monoglaciology better fits the prevalent suggested causes of glaciation, those of world wide rainfall and sharp mountain uplift, than does polyglaciology. Monoglaciology is

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much simpler to explain from a scientific point of view than is polyglaciology.

The Genesis account attributes the flood to the vast release of water from the atmosphere and the earth's interior. It came suddenly and overwhelmingly, and made the earth a watery grave. The flood was followed by a sharp rise of mountains, especially in the northern hemisphere, causing continental glaciation. This glaciation resulted in the last, and probably only ice stage confronted by mankind.

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