Chapter 14

EFFECTS OF THE FLOOD

What actually happened after the Flood

This chapter is based on pp. 665-719 of Origin of Life (Volume Two of our three-volume Evolution Disproved Series). Not included in this chapter are at least 80 statements by scientists, plus specialized articles. You will find them, plus much more, on our website: evolution-facts.org.

The oldest historical records of mankind in our possession were written by Moses. These are the books of Genesis and Job. In the first of these is given the history of the world from about 4000 B.C. on down to about 1900 B.C. **In the first two chapters of Genesis we find an account of Creation Week**, when our world and everything in it were made. **In Genesis 6 to 9 we are told about the worldwide Flood that occurred about 2348 B.C.** (1656 A.M. [anno mundi], or about 1,656 years after Creation).

The effects of that gigantic Flood of waters were so dramatic that we find many evidences of it today. It is impossible to properly study origins and earth science without an understanding of the effects of the Flood. For this reason, we are including it in this chapter.

We will begin by considering rock strata and fossil remains as an effect and evidence of the Flood.

Following this, we will view several non-strata and fossil effects of the time before the Flood, during the Flood, and a period of time immediately after the Flood ended.

In this chapter, we will obtain a better understanding of the

effects of the Flood. We will also see more clearly how **those effects prove, not uniformitarianism, but catastrophism. There was a worldwide Flood! It alone can explain so many geographical features on our planet today.**

UNIFORMITARIANISM—A basic principle of evolution for over a century has been the theory of *uniformitarianism,* which teaches that *"all things continue as they were from the beginning"* (you will find 2 Peter 3:3-7 interesting reading).

When evolutionists gaze upon the immense ocean, the millions of fossils and thick coal seams in the sedimentary rocks, the sea shells on top of the highest mountains, the deep canyons with small rivers, vast dried-up lake beds, and thrust-up mountain blocks,—they declare that it all came about by the same fairly gentle processes and natural forces that are operating today.

> "This is the great underlying principle of modern geology and is known as the *principle of uniformitarianism* . . Without the principle of uniformitarianism there could hardly be a science of geology that was more than pure description."—**W.D. Thornbury, Principles of Geomorphology (1957), pp. 16-17.*

Thoughtful scientists admit that **the uniformitarian theory explains nothing about the age of fossils, rock strata, the age of the earth, or anything else:**

> "The idea that the rates or intensities of geological processes have been constant is so obviously contrary to the evidence that one can only wonder at its persistence . . Modern uniformitarianism . . asserts nothing about the age of the Earth or about anything else."—**James H. Shea, "Twelve Fallacies of Uniformitarianism," in Geology, September 1982, p. 457.*

> "Uniformitarianists find it particularly difficult to apply their principle, namely: (1) the cause of mountain-building; (2) the origin of geosynclines; (3) the origin of petroleum; (4) the cause of continual glaciation; (5) the mechanics of overthrusting; (6) the cause of peneplains; (7) the cause of worldwide warm climates; (8) the nature of volcanism producing vast volcanic terrains; (9) the nature of continental uplift processes; (10) the origin of mineral deposits; (11) the nature of metamorphism; (12) the origin of saline deposits; (13) the nature of granitization; and (14) the origin of coal measures. Not one of the above phenomena has yet been adequately explained in terms of present processes."—*H.R. Siegler, Evolution or Degeneration—Which? (1972).*

See chapter 12, *Fossils and Strata,* for much more information on this.

CATASTROPHISM—In contrast, the concept called ***catastrophism*** **teaches that a terrible crisis occurred at some earlier time.**

Geologic evidence on all sides is clear that it was a catastrophe of such gigantic proportions that rocks were twisted, mountains were hurled upward, water was pulled out of the earth, and the very atmosphere was dramatically affected. As a consequence, thousands of volcanoes erupted and vast glaciers moved downward from poles which had earlier been warm.

> "[*Bretz] has been unable to account for such a Flood but maintained that field evidence indicated its reality. This theory represents a return to catastrophism which many geologists have been reluctant to accept."—**W.D. Thornbury, Principles of Geomorphology (1954), p. 401.*

The evidence is so profound that many secular scientists are indeed turning away from uniformitarianism.

> "In fact, the catastrophists were much more empirically minded than Lyell [who first widely championed uniformitarianism over a century ago]. The geologic record does seem to require catastrophism: rocks are fractured and contorted; whole faunas are wiped out. To circumvent this literal appearance, Lyell imposed his imagination upon the evidence. The geologic record, he argued, is extremely imperfect and we must interpolate into it what we can reasonably infer but cannot see. The catastrophists were [in contrast] the hard-nosed empiricists of their day."—**Stephan Jay Gould, "Catastrophes and Steady State Earth," in Natural History, February 1975, p. 17. [Gould is a professor at Harvard University, teaching geology, biology, and the history of science.]*

> "Conventional uniformitarianism, or 'gradualism,' *i.e.*, the doctrine of unchanging change, is verily contradicted by all post-Cambrian sedimentary data and the geotectonic [earth movement] histories of which these sediments are the record."—**P.D. Krynine, "Uniformitarianism is a Dangerous Doctrine," in Paleontology, 1956, p. 1004.*

> "Often, I am afraid the subject [of geology] is taught superficially, with Geikie's maxim 'the present is the key to the past' used as a catechism and the imposing term 'uniformitarianism' as a smokescreen to hide confusion both of student and teacher."—

**Stephen Jay Gould, "Is Uniformitarianism Useful?" in Journal of Geological Education, October 1957, p. 150.*

I - FOSSILS, STRATA, AND THE FLOOD

Although this section duplicates portions of our earlier chapter, Fossils and Strata, *the duplication is considered necessary; for* ***we will now correlate the fossil and strata evidence with the world-wide Flood.*** *Without doing so, it would be more difficult to properly assess the relationships, implications, and impact of the Flood.*

FOSSILS AND ROCK STRATA—Above the molten rock at the center of our planet is a mantle of black basalt, from which flows the lava which issues forth out of volcanoes. Above that basalt is to be found the light-colored, coarse-grained crystals we call granite. This is the basement rock of the world and undergirds all of our continents. **At times this granite is close to the surface, but frequently a large quantity of sedimentary rock is above it.**

The sedimentary rock that overlays the granite was obviously laid down by a gigantic Flood of waters, and is characterized by strata or layers. The strata are composed of waterborne sediments, such as pebbles, gravel, sand, and clay.

> "About three-fourths, perhaps more, of the land area of the earth, 55 million square miles [142 million km^2], has sedimentary rock as the bedrock at the surface or directly under the cover of the mantle-rock . . The thickness of the stratified rocks range from a few feet to 40,000 feet [121,920 dm] or more at any one place . . The vast bulk of the stratified rocks is composed of shallow-water deposits."—**O.D. von Engeln and *K.E. Caster, Geology (1952), p. 129.*

Within that strata is to be found billions upon billions of fossils. These are the remains—or the casts—of plants and animals that suddenly died. Yet **fossilization does not normally occur today; for it requires sudden death, sudden burial, and great pressure.**

> "To become fossilized a plant or animal must usually have hard parts, such as bone, shell or wood. It must be buried quickly to prevent decay and must be undisturbed throughout the *process.*"—**F.H.T. Rhodes, H.S. Zim, and *P.R. Shaffer, Fossils (1962), p. 10.*

The sedimentary strata (also called *fossil-bearing strata* or

"the geologic column") **were laid down at the time of the Flood. There are no fossils in the granite, for that rock was formed prior to the Flood.**

We would not expect to find fossils in granite since the astounding information given in chapter 3, *Origin of the Earth*, reveals granite to be "creation rock," antedating the Flood. We there learned that, back in the beginning, granite came into existence in less than three minutes!

MILLIONS OF ANIMALS SUDDENLY DIED—The quantity of fossils in the sedimentary rocks is enormous.

> "At this spot [in Wyoming] the fossil hunters found a hillside literally covered with large fragments of dinosaur bones . . In short, it was a veritable mine of dinosaur bones . . The concentration of the fossils was remarkable; they were piled in like logs in a jam."—**Edwin Colbert, Men and Dinosaurs (1968), p. 151.*

Scores of other instances of immense *"fossil graveyards"* could be cited. **Vast quantities of plants and animals were suddenly buried.** So many fossils exist that one researcher made a *carbon inventory*,—and found that **at the present time—most of the carbon in our world is locked within the fossils in the sedimentary strata!**

There must have been an immense quantity of living plants and animals before the worldwide Flood occurred. Evidence indicates that back then our world had no deserts, high mountains, few or no oceans, and plants and animals flourished even near the poles. So the world would have been filled with vegetation and animal life.

MOST SPECIES ARE ALREADY EXTINCT—Some great natural catastrophe occurred earlier in history, for most of the species which have ever lived are no longer alive!

> "Natural selection not only brings new species into existence—if it does—but also eliminates species, and on a colossal scale. It is calculated that 99 per cent of all the species which have ever existed are now extinct. So perhaps it may be more instructive to discover why species vanish than why they appear."—**G.R. Taylor, Great Evolution Mystery (1983), p. 86.*
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> "There is no need to apologize any longer for the poverty of the fossil record. In some ways it has become almost unmanageably rich, and discovery is outpacing integration."—**T.N. George, "Fos-*

sils in Evolutionary Perspective," in Science Progress, January 1960, p. 1.

WHY FOSSILS ARE SO IMPORTANT—The term, "evolution," means that species change gradually into different species. **If such species changes are occurring today, the transitional forms should be seen. If it has occurred in the past, the fossil record will show the transitional forms.**

It is of interest that evolution bases its case on the fossils. This is because there is no evidence that evolutionary processes are occurring today. Therefore the Darwinists must consider the fossils to be their primary evidence that it has ever occurred at all.

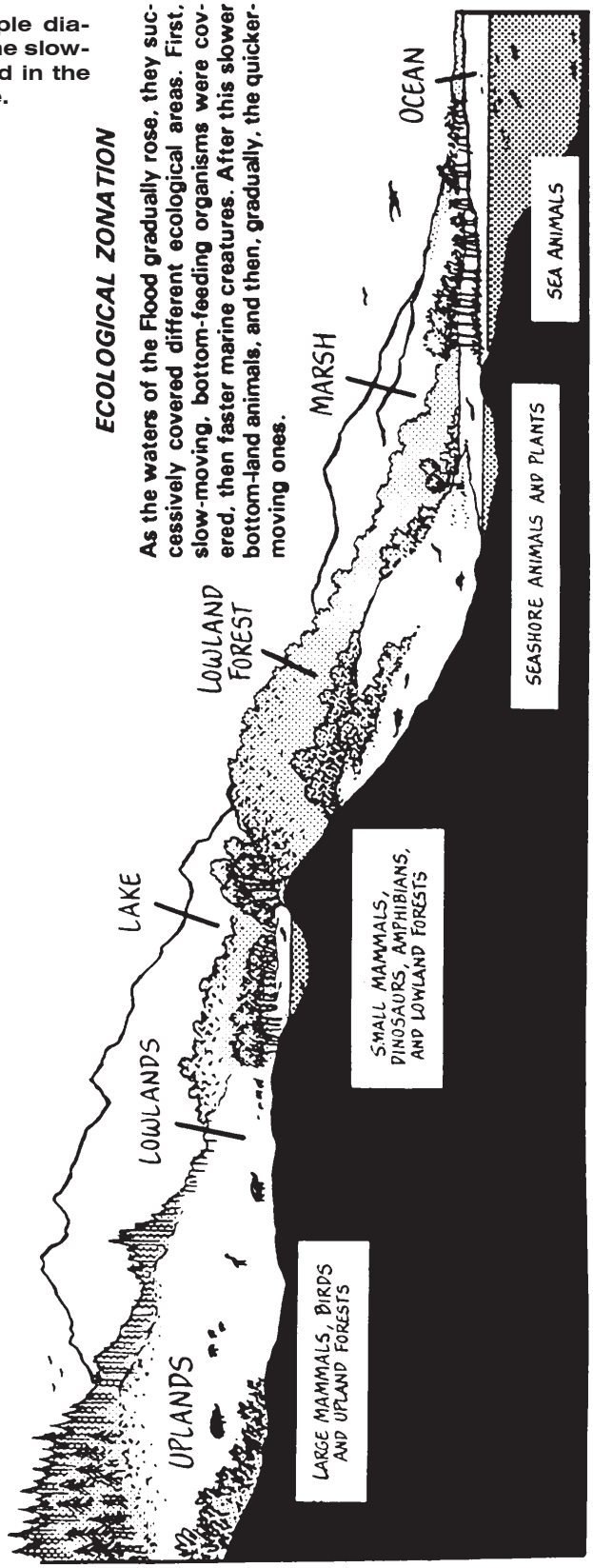
> "The most important evidence for the theory of evolution is that obtained from the study of paleontology [fossils]. Though the study of other branches of zoology, such as comparative anatomy or embryology, might lead one to suspect that animals are all interrelated, it was the discovery of various fossils and their correct placing in relative strata and age that provided the main factual basis for the modern view of evolution."—**G.A. Kerkut, Implications of Evolution (1960), p. 134.*

> "Although the comparative study of living plants and animals may give very convincing circumstantial evidence, fossils provide the only historical, documentary evidence that life has evolved from simpler to more and more complex forms."—**O. Dunbar, Historical Geology (1960), p. 47.*

But just as there are no transitional forms today, there are none in the past either! At the present time, all we have are distinct plant and animal kinds. No transitional species are to be found. (**We will frequently refer to these basic types as *"species,"* although man-made classification systems vary**, sometimes incorrectly classifying sub-species or genera as "species." See chapter 11, *Animal and Plant Species* for more on this.)

In that great window to the past—the fossil record—we also find only distinct plant and animal kinds, with no transitional forms. With the exception of creatures that have become extinct (plants and animals which are no longer alive today, such as the dinosaurs), **all fossils of plants and animals which did not become extinct are just like those living today *(stasis)*. Only distinct species are to be found; there are no halfway, or transitional, species *(gaps)*. Thus there is NO evidence of evolution in**

ECOLOGICAL ZONATION—This simple diagram illustrates how, as the rains fell, the slowest creatures were first to be entombed in the sediments, and then larger ones above.



the fossils.

In *Kerkut's statement, quoted above, it is "the placing" of the fossils in the strata that provides the evidence of evolution. **All the Darwinists have to base their case on is *placement*, not *transitional forms*. But what caused that placement?**

FOSSIL PLACEMENT—The slowest-moving creatures were buried first; after that, the faster-moving ones. As the waters of the worldwide deluge rose higher and still higher, they first covered the slowest-moving water creatures and buried them under sediment.

Then the **slower-moving land creatures** were covered and buried under sediment. Then the **more agile creatures (both water and land)** were covered. In the fossil-bearing sedimentary strata we frequently find this arrangement, with the smaller creatures in the lower strata and the larger ones higher up.

Yet even the smallest creatures are complex. Just beneath the lowest stratum, the Cambrian, we find no fossils at all! This is both an astonishment and a terrible disappointment to the evolutionists. The lowest-level life forms in the strata are complex multi-celled animals and plants.

> "It has been argued that the series of paleontological [fossil] finds is too intermittent, too full of 'missing links' to serve as convincing proof. If a postulated ancestral type is not found, it is simply stated that it has not so far been found. Darwin himself often used this argument—and in his time it was perhaps justifiable. But it has lost its value through the immense advances of paleobiology [the study of animal fossils] in the twentieth century . .

> The true situation is that those fossils have not been found which were expected. Just where new branches are supposed to fork off from the main stem it has been impossible to find the connecting types."—*N. Heribert-Nilsson, Synthetische Artbildung (1953), p. 1168 [Director of the Botanical institute at Lund, Sweden].*

Each twig on the imaginary plant and animal *"family trees"* is a distinct plant or animal type, either extinct or like what we have today (although frequently larger). But **there are no intermediate life forms to connect the twigs! There are no branches and no trunk, only "twigs."** The rest of the tree is imaginary.

RAPID FORMATION OF IMMENSE DEPOSITS—Nowhere on earth today do we have fossils forming on the scale that we see in geologic deposits. The Karro Beds in Africa, for example, contain the remains of perhaps 800 billion vertebrates! But **such fossils are not forming today.** A million fish can be killed in red tides in the Gulf of Mexico, but they simply decay away; they do not become fossils. Similarly, debris from vegetation does not today become coal. **In order for fossilization to occur, the vegetation would have to be rapidly buried under an extremely heavy load of sediment.**

It required massive Flood conditions to do all that burying. An immense worldwide catastrophe occurred in the past. It produced the Sicilian hippopotamus beds, the fossils of which are so extensive that they are mined as a source of charcoal; the great mammal beds of the Rockies; the dinosaur beds of the Black Hills and the Rockies, as well as in the Gobi Desert; the fish beds of the Scottish Devonian stratum, the Baltic amber beds, Agate Spring Quarry in Nebraska, and hundreds more. **None of this fossil-making is being done today. It only happened one time in history—at the time of the Flood.**

Frequently the fossils in these beds come from widely separated and differing climatic zones, only to be thrown together in disorderly masses. Nothing but a worldwide Flood can explain this. And those fossils had to be rapidly buried. *Pinna explains why this is so.

> "In fact, when an organism dies, the substances that compose its soft parts undergo more or less rapid decay, due to such factors as attack by bacteria and erosion by water (particularly the sea) . . If

an organism is to be preserved, it must be protected from destructive agents as quickly as possible . . And the sooner that this consolidation occurs, the more likely it is that the organism will be preserved . . there are also certain layers, such as those formed from extremely fine-grained calcareous rocks, which have consolidated so rapidly as to permit the preservation of the most delicate structures of many organisms."—**G. Pinna, The Dawn of Life, pp. 1-2 [Deputy Director of the Museum of Natural History in Milan, Italy]*.

In spite of these facts, there are still science writers who imagine that when an animals falls into mud, tar, or water—and dies,—it becomes a fossil! But such an idea is only fiction.

"We can easily imagine the predicament which led to the fossilization of the three individuals [three fossil birds] so long ago. They were probably forced into reluctant flight by some pursuing reptilian predator, only to flop down on the water and mud from which they could not rise."—**R. Peterson, The Birds, p. 10.*

PRECAMBRIAN VOID—<u>The lowest stratum with fossils in it is called the *"Cambrian."* It has a great wealth of over a thousand different types of creatures</u>—all complex and multicelled marine animals.

"At least 1500 species of invertebrates are known in the Cambrian, all marine, of which 60% are trilobites and 30% brachiopods."—**Maurice Gignoux, Stratigraphic Geology (1955), p. 46.*

Above this are the Ordovician, Silurian, and Devonian, and they all include sea creatures similar to those in the Cambrian. It is not until the Permo-Carboniferous that the first land animals are encountered.

The worldwide fossil strata give abundant evidence of a great Flood of waters that covered the earth. **Below the sedimentary strata, with its hoard of fossils, we find the "Precambrian period,"—and no fossils.** (Some scientists claim that a few are there, others say they are not sure, while still others maintain that there are absolutely no fossils below the Cambrian.)

<u>The sedimentary strata with their billions of fossils are both a powerful effect and evidence of the Flood. The Precambrian lack of fossils is an additional evidence of it</u>. Evolutionists point to these strata with their fossils as proof of evolution. But throughout the fossil rock we should find transitional—evolving—types of

plants and animals. In addition, **at the bottom below the Cambrian should be the types that evolved into those in the Cambrian.**

> "One can no longer dismiss this event by assuming that all Pre-Cambrian rocks have been too greatly altered by time to allow the fossils ancestral to the Cambrian metazoans to be preserved . . Even if all the Pre-Cambrian ancestors of the Cambrian metazoans were similarly soft-bodied and therefore rarely preserved, far more abundant traces of their activities should have been found in the Pre-Cambrian strata than has proved to be the case. Neither can the general failure to find Pre-Cambrian animal fossils be charged to any lack of looking."—**W.B. Harland and *Rudwick, "The Great Infra-Cambrian Ice-Age," in Scientific American, 211(1964), pp. 34-36.*

> "Why should such complex organic forms (in the Cambrian) be in rocks about six hundred million years old, and be absent or unrecognized in the records of the preceding two billion years? If there has been evolution of life, the absence of requisite fossils in the rocks older than the Cambrian is puzzling."—**G.M. Kay and *E.H. Colbert, Stratigraphy and Life History (1965), pp. 102-103.*

FOSSIL TREES—<u>Polystrate trees are fossil trees which extend vertically through several layers of rock strata</u>. They are often 20 feet [60.9 dm] or more in length. Often the entire length of each tree will be preserved, along with the top and bottom. **Such a formation would easily be explained by the Flood, but impossible to be fitted into the theory of uniformitarianism**, which says that the rock strata are like tree rings, and have slowly been forming over the last two billion years. Each stratum supposedly took millions of years to form.

<u>There is no doubt that those trees were quickly covered by the strata, otherwise each tree would have decomposed</u> while waiting for a hundred thousand years of strata to form around it. From bottom to top, these upright trees sometimes span "millions of years" of strata. Quite obviously, **<u>both the trees and sediments around them were moved into place and deposited at the same approximate time</u>.**

Many will recall the explosion of Mount St. Helens on May 18, 1980. Research was done at the site shortly afterward; and it was discovered that the explosion filled Spirit Lake with logs, many of

which were floating vertically, due to the weight of their roots. This helps explain what took place at the time of the Flood, as trees were washed into an area and then, while floating vertically in the water, were covered by a rapid deposit of sediment.

As a result of upheaval of ground, combined with successive depositions of sedimentary layers, **there are instances in which vertical trees are to be found at more than one level. Given the chaotic conditions at the time of the Flood, this would be understandable.** Fossil trees have been found horizontal, vertical, diagonal, and upside down.

COAL AND OIL—Most geologists agree that coal came from ancient plants, and oil came from ancient marine animals (primarily the soft parts of invertebrates, but also fish). **Neither coal nor petroleum is naturally being formed today.** None of it is found in Pleistocene (ice-age) deposits, but instead was quickly laid down during the Flood, before the glacial ice flows began.

> "Petroleum occurs in rocks of all ages from the Cambrian to the Pliocene inclusive, but no evidence has been found to prove that any petroleum has been formed since the Pliocene, although sedimentation patterns and thicknesses in Pleistocene and recent sediments are similar to those in the Pliocene where petroleum has formed."—**Ben B. Cox, "Transformation of Organic Material into Petroleum under Geological Conditions," Bulletin of the American Association of Petroleum Geologists, May 1946, p. 647.*

Why did no petroleum form after the Pliocene era? This is a mystery to evolutionary geologists, but it is no problem to Flood geology.

From the beginning of the Cambrian to the end of the Pliocene was when the Flood occurred.

> "The apparent absence of formation of petroleum subsequent to the Pliocene must be explained in any study of the transformation of organic material into petroleum."—**Ibid.*

(Some oil deposits have been found below the Cambrian level, but it was afterward learned that they seeped there from fossil-bearing strata above.)

Great masses of vegetation, that became the coal we use today, were quickly laid down. *Because of Flood conditions, other things were also deposited in those coal strata:*

(1) Marine fossils (tubeworms, corals, sponges, mollusks, etc.) are often found in coal beds.

(2) Large boulders are found in them.

(3) Fossil trees are found standing on an angle or even upside down in coal beds.

(4) Washed-in marine sediments will split a coal seam into two.

(5) Sediment "under-soils" will frequently be under them.

(6) Strata of deposited limestone, shale (hardened clay), or sandstone will be found in between coal deposits. These strata are often found scores of times in seams of coal.

Evolutionists maintain that oil and gas require millions of years to form, and could not be rapidly produced from vegetation, as Flood geology would require. But **recent experiments have shown that petroleum can be quickly made:**

> "There is great promise in a system being developed by government scientists that converts organic material to oil and gas by treating it with carbon monoxide and water at high temperature and pressure . . By using the waste-to-oil process, 1.1 billion barrels [131 billion liters] of oil could be gleaned from the 880 million tons [798 mt] of organic wastes suitable for conversion [each year]."—*L.L. Anderson, "Oil from Garbage," in Science Digest, July 1973, p. 77.*

Here is an instance in which recently formed coal occurred:

> "Petzoidt (1882) describes very remarkable observations which he made during the construction of a railway bridge at Alt-Breisach, near Freiburg. The wooden piles which had been rammed into the ground were compressed by overriding blocks. An examination of these compressed piles showed that in the center of the compressed piles was a black, coal-like substance. In continuous succession from center to surface was blackened, dark-brown, light-brown and finally yellow-colored wood. The coal-like substance corresponded, in its chemical composition, to anthracite [hard coal], and the blackened wood resembled brown coal."—**Otto Stutzer, Geology of Coal (1940), pp. 105-106.*

> "From all available evidence it would appear that coal may form in a very short time, geologically speaking if conditions are favorable."—**E.S. Moore, Coal (1940), p. 143.*

PROBLEM OF GRADED BEDDING—Geologists maintain that the sedimentary strata was gradually laid down over hundreds of millions of years. But **various aspects of the strata indicate it**

was laid down rapidly under alluvial conditions. Rapid transport of various materials by water appears to have been the cause.

One example of this is *graded bedding.* In the strata we will find a layer of coarse pebbles and small stones, with smaller pebbles above them, grading off above to still finer materials such as sand. Below this graded bedding will be another graded bedding, where the process has been repeated as another collection of sediments was washed in.

> "The phenomenon of *graded bedding* (coarse conglomerate on the bottom, with finer material graded upward) is difficult to explain on the basis of uniformity, but not on the basis of Genesis 8:1-3 where we are told that the Creator dried up the flood-waters by strong winds that drove the waters by a "going and returning." This process, too, would more readily account for *interbedding,* the repetitive alternation of certain layers, in some instances as many as 150 strata. Uniformitarian geology offers no satisfactory explanation for this phenomenon.
>
> "Then there is the matter of *disconformities,* that is, a sudden change in fossil types with no accompanying change in the physical composition of the rock formation, or the appearance of fossils separated by a tremendous time gap. This is not accounted for in uniformitarianism. If the deposition had been uniform, as claimed, such disconformities should not have occurred. The perplexing occurrence of so-called '*older* fossils' above 'younger *fossils'*—which paleontologists try to account for by thrust faults, can much more readily be accounted for by accepting the occurrence of worldwide volcanic and seismic upheavals such as accompanied the Deluge. In fact, the mere presence of vast numbers of fossils is explainable only if plants and animals were suddenly inundated, trapped, and buried in moving masses of sediment. It is almost impossible to explain how organisms could have been transformed into fossils if they had simply perished and had remained exposed to the decaying process of air, sun, and bacteria.
>
> "There are so-called *fossil graveyards* in which is often found a rich conglomeration of organisms. One such, found in Eocene lignite deposits of the Geiseltal in central Germany, contains more than six thousand remains of vertebrate animals together with an even greater number of mollusks, insects, and plants. So well-preserved are many of these animals that it is still possible to study the contents of their stomachs. It is easy to imagine how these could have been deposited by the swirling and receding waters of a great flood, but not how this could have happened under uniformitarian

conditions."—*H.R. Siegler, Evolution or Degeneration—Which? (1972), pp. 78-79.*

UNITY OF THE STRATA—Basic to evolutionary theory is the concept that each stratum was laid down during a period of millions of years while the other strata were laid down in other epochs or eras. All of the strata are said to have required two billion years to form.

In contrast, the evidence indicates that the fossils in each strata were laid down rapidly rather than slowly. But, in addition, **there is also evidence that each stratum was deposited at about the same time as all the other strata!**

The primary difference is that each layer has somewhat different fossils in it; but this too would easily be explained by a gradually rising Flood that washed in, and then quickly buried great masses of plants and animals. One layer and then the next was rather quickly laid down by the Flood.

Two of the most important boundary points in the geologic column are the *Paleozoic to Mesozoic,* and the Mesoz*oic to Cenozoic.*

Careful research by *Wiedmann in Germany has revealed that **there is no observable time break between these, the two most obvious divisions in the geologic column!**

"The boundaries between eras, periods and epochs on the geological time-scale generally denote sudden and significant changes in the character of the fossil remains. For example, the boundary between the Triassic and Jurassic periods of the Mesozoic era (about 180 million years ago) was supposedly marked by spontaneous appearance of new species . . A reassessment of the data by Jost Wiedmann of the University of Tübingen in the Federal Republic of Germany, gives a clearer picture of evolution at the boundaries of the Mesozoic (225 million to 70 million years ago). He concludes that there were no worldwide extinctions of species or spontaneous appearances of new species at the boundaries."—**Report of the International Geological Congress at Montreal: "Fossil Changes: 'Normal Evolution,' " in Science News, September 2, 1972, p. 152.*

This is an important point that *Wiedmann brings to the attention of the scientific world. While most evolutionists maintain that the geologic column slowly formed amid the peace and tranquility

of uniformitarian ages, there are other evolutionists who declare that there must have been a succession of several catastrophes that accomplished the task. But *Wiedmann carefully analyzed the two principle boundaries in the column—and discovered that **"no world-wide extinctions of species or spontaneous appearances of new species" occurred at these boundaries. This is important. The entire geologic column is an integral unit and was all rapidly laid down at about the same time.**

Here are some additional reasons why this is so:

(1) *Rapid or no Fossils.* **Each stratum had to be laid down rapidly, or fossils would not have resulted.**

(2) *Rapid or no Rocks.* **The physical structure and interconnections of the strata require rapid deposition in order for them to form into rocks.**

(3) *No Erosion between Strata.* **Each strata was laid directly over the one below it, since there is no trace of erosion between them.** Each strata was formed continuously and rapidly, and then—with no time-lapse erosion in between—the next strata formed continuously and rapidly over that. And on and on it went.

(4) *Layers not Worldwide*. **There are many "unconformities," where one stratum ends horizontally and another begins.** But there is no worldwide unconformity; instead **one stratum will gradually grade imperceptibly into another**, which thereupon succeeds it with more continuous and rapid deposition, without a time break at any point.

(5) *Generally no Clear Boundaries.* **There is rarely a clear physical boundary between strata formations.** Generally they tend to merge and mingle with each other in a zone of considerable thickness.

STRATA SEQUENCE AND OVERTHRUSTS—If evolutionary theory were correct, each layer of the cake would be quietly set in place on top of the preceding one over a span of long ages.

But instead we find *"disconformity"* and *"overthrusts."* A *"recent stratum"* which should therefore be near the top, will be underneath several *"older* strata."

This can easily be explained by the turbulence of a single world-

"Why are sea shells way up here?"

"I am trying to make a fossil. I'm working on a six-month research grant. All I have to do is sit here and watch this dead fish."

"I'm trying to figure out a mathematical formula complicated enough to explain the eye of a trilobite."

"Who am I? I'm a research scientist. According to our theory, since the Matterhorn traveled from such a great distance to get here,—there's should be no way to stop it! It ought to still be moving at least 500 feet a month."

wide Flood which laid down all the strata within a relatively short time.

But evolutionary theory is totally baffled by such a situation. So its supporters have invented the theory of *"overthrusts."* As we mentioned in chapter 12, the *Matterhorn*—one of the highest and most prominent mountains in Switzerland—is supposed to have moved horizontally many miles from some distant place. Evolutionary theories about rock strata require such a hypothesis. ***Either the mountains pack up and move to other lands, or evolution dies a sickening death.***

The entire Matterhorn rests on top of what is theorized as *"younger strata,"* therefore it is said to have hiked over the hills to its present location. The same is true for **the *Appalachians,*** which **climbed up out of the Atlantic onto the North American continent. They arrived before the Pilgrims!**

But, in reality, overthrusts are but another effect of the Flood. For example, at one point, some land animals and plants were covered by Flood-borne sediments. Then, from some distant location, waters with fish were carried in and deposited in a pile of sediment above the land creatures. And so it went.

A related problem is that, **<u>although the very bottom stratum should always be the Cambrian,—in actuality, many different strata are found at the bottom</u>!**

> "Further, how many geologists have pondered the fact that lying on the crystalline basement are found from place to place not merely Cambrian, but rocks of all ages?"—**E.M. Spieker, "Mountain-Building Chronology and Nature of Geologic Time-Scale," in Bulletin of the American Association of Petroleum Geologists, August 1956, p. 1805.*

How do you solve a problem like that? **Amid the confusion of a worldwide deluge, and bursts of massive earth movements and hurricane winds, all kinds of strata patterns could occur. Flood theory can solve questions that evolutionary theory cannot answer.**

FLOOD PREDICTIONS—<u>If the Flood caused the sedimentary rock strata, with their billions of fossils, then *the following points would be expected</u>;—and, upon examination of the*

fossils in the strata—they all prove true:

(1) Animals living at the lowest levels would tend to be buried in the lowest strata.

(2) Creatures buried together—would tend to be buried with other animals that lived in the same region or ecological community.

(3) Hydrologic forces (the suck and drag of rapidly moving water) would tend to sort out creatures of similar forms. Because of lower hydraulic drag, those with the simplest shapes would tend to be buried first.

(4) Backboneless sea creatures (marine invertebrates), since they live on the sea bottom, would normally be found in the bottom strata.

(5) Fish would be found in higher strata since they can swim up close to the surface.

(6) Amphibians and reptiles would be buried higher than the fish, but as a rule, below the land animals.

(7) Few land plants or animals would be in the lower strata.

(8) The first land plants would be found where the amphibians were found.

(9) Mammals and birds would generally be found in higher levels than reptiles and amphibians.

(10) Because many animals tend to go in herds in time of danger, we would find herd animals buried together.

(11) In addition, the larger, stronger animals would tend to sort out into levels apart from the slower ones (tigers would not be found with hippopotamuses).

(12) Relatively few birds would be found in the strata, since they could fly to the highest points.

(13) Few humans would be found in the strata. They would be at the top, trying to stay afloat until they died; following which they would sink to the surface of the sediments and decompose.

In the above 13 points, we have a solid Flood explanation for what we find in the sequence of fossils in the geologic column.

Yet, lacking any other evidence to bring forward, it is that very sequence of fossils placement which evolutionists declare to be the

primary evidence that animals have "evolved" from one another!

ANOTHER LOOK AT THE "GEOLOGIC COLUMN"—<u>Compare the following analysis with the two-page chart near the beginning of chapter 12, *Fossils and Strata*:</u>

***Recent (Holocene)*—**Glaciers melt. Evidences of human civilization.
***Pleistocene*—**The Flood waters conclude their receding from the continents. Fossils, strata, and petroleum are no longer being formed. The ice age begins.
***Pliocene*—**The Flood has ended. First mountain building begins, as continents begin rising, ocean basins dropping, and oceans filling. If this had not occurred, everything today would be under water. Some strata forming continues.
***Miocene*—**First large numbers of birds buried. First evidence of volcanic lava.
***Oliogocene*—**First of the very agile monkeys and apes buried.
***Eocene*—**First faster animals (such as horses) buried. No more slow animals (including dinosaurs).
***Triassic*—**First strong land animals buried (slowest dinosaurs).
***Mississipian*—**First land animals buried (slow ones, such as small reptiles).
***Silurian*—**First land plants laid down.
***Cambrian*—**Flood begins. Fossils and strata begin. Slowest creatures buried. But plants float up to higher levels.
***Precambrian*—**Prior to the Flood. No sedementary strata or fossils.

A more complete explanation of the above chart is given in the pages which follow.

2 - RECORDS ABOUT THE FLOOD

WORLDWIDE FLOOD—Ours is the water planet. We have 330 million cubic miles [2212 million km^3] of it! Water covers 72 percent of our planet's surface. Every cubic mile of seawater holds over 150 million tons [136 mt] of minerals. On the average, rain pours down on our planet at the rate of 1.5 tons [1,361 kg] a day. At the present time, there is 70 billion gallons [26,822 liters] of water for every person alive. **<u>The oceans of the world are so vast and deep that if Earth had an absolutely level crust, the sea would form an envelope over 8,800 feet [26,822 dm] deep</u>.**

The antediluvian world had never seen rain before. But when it came, *it really came.* When the Genesis Flood began, the vast water canopy collapsed and "the floodgates of the sky

were opened." Torrential rains fell for six weeks.

FLOOD STORIES—<u>Races and tribes all over the world have, as part of their traditions, stories about a great Flood of water that covered the whole earth</u>. The event was so world-shattering and life-changing that, from parents to children, stories of that great upheaval passed down through the generations. Gradually, as mythologies developed, legends about this Flood became part of them. These stories include various aspects of the Genesis account of the Flood:

> "It has long been known that legends of a great flood, in which almost all men perished, are widely diffused over the world."—**George Frazer, Folklore in the Old Testament, Vol. 1 (1919), p. 105.*

One survey of 120 tribal groups in North, Central, and South America disclosed Flood traditions among each of them *(*International Standard Bible Encyclopedia, Vol. 2, p. 822).*

(1) There was general wickedness among men.
(2) God saw that a Flood was necessary.
(3) One family with eight members was protected.
(4) A giant boat was constructed.
(5) The family, along with animals and birds, went into the boat.
(6) The Flood overwhelmed all those living on the earth.
(7) The deluge covered all the earth for a time.
(8) The boat landed in a high mountainous area.
(9) Two or three birds were sent out first.
(10) The people left the boat with all the animals.
(11) The survivors worshiped God for sparing them.
(12) A promise of divine favor was given that there would not be another worldwide Flood of waters.

Another survey of ancient Flood literature and legends is discussed by B. Nelson in *The Deluge Story in Stone* (1968). In this tabulation, **the stories and writings of 41 different tribal and national groups** were given.

First, we will list these 41 groups, many of which were ancient races. *("A and B"* indicate two different sub-groups; example: Fiji A and B.)

Assyria-Babylonia (A and B), Alaska, Andaman Island, Asia Minor, Aztecs, Brazil, Cherokee, China, Cree, Egypt, Esquimaux (Canada), Fiji (A and B), Greece, Hawaii, India (A and B), Italy, Lapland, Lenni Lenape,

Lithuania, Leward Islands, Mandan, Michoacan, Nicaragua, Papagos (Mexico), Persia (A and B), Peru, Pimas, Russia, Scandinavia (A and B), Sumatra, Syria, Takoe, Thlinkut (A and B), Toltecks, Wales.

Second, we will list twelve points in their legends, according to the number of times each is included by each of the 41 groups.

Destruction by a Flood—*41 times.*
Some humans saved—*38 times.*
A boat saved them—*36 times.*
Universal destruction by the Flood—*24 times.*
One family was especially favored for protection—*15 times.*
The Flood was caused by man's transgressions—*14 times.*
The Flood came as a result of a divine decree—*10 times.*
Birds were sent out first—*9 times.*
Animals were saved by the boat also—*8 times.*
The survivors worship God after leaving the boat—*7 times.*
The boat landed in a high mountainous area—*6 times.*
After leaving the boat, God spoke favor to the saved—*5 times.*

An even larger collection of Flood stories is to be found in *Sir James G. Frazer's book, *Folklore in the Old Testament* (1919), Vol. 1, pp. 146-330. There are 11 Hellenic stories from ancient Greece, 6 European stories, 29 Persian and Indian stories, 31 Australian, Southeast Asia, and Pacific stories, 63 North, Central, and South American stories, and 3 African stories related in 185 pages of Frazer's book; a total of 143 Flood stories. You will find them listed in Donald W. Patten (ed), *Symposium on Creation IV* (1972), pp. 36-38.

An excellent five-page analysis of confusion-of-tongues legends will be found in James E. Strickling, *"Legendary Evidence for the Confusion of Tongues,* "in *Creation Research Society Quarterly, September 1974, pp. 97-101.* Quotations from a number of sources are given.

> "There are many descriptions of the remarkable event [the Genesis Flood]. Some of these have come from Greek historians, some from the Babylonian records; others from the cuneiform tablets [of Mesopotamia], and still others from the mythology and traditions of different nations, so that we may say that no event has occurred either in ancient or modern times about which there is better evidence or more numerous records, than this very one . . It is one of the events which seems to be familiar to the most distant nations—in Australia, in India, in China, in Scandinavia, and in the various

parts of America."—*Stephen D. Peet, "Story of the Deluge," American Antiquarian, Vol. 27, No. 4, July-August 1905, p. 203.*

NOAH'S NAME—If the story of the Ark and the Flood is to be found among 120 different tribes of earth, should we not expect that Noah's name would be remembered by some of them also?

Noah's name is found in the stories and languages of mankind. That is a striking cultural evidence of the worldwide Flood which, itself, left so many physical evidences upon our globe. Not only do the rock strata and their fossil contents vindicate the veracity of the Flood story, but the languages of man do also! Here are some interesting facts

Sanskrit (of ancient *India)* is a basic language, dating back nearly to the time of the Flood. According to the legends of India, *Ma-nu* was the man who built the boat and then, with seven others, entered it and were saved. *Ma* is an ancient word for "water." *Ma-nu* could then mean "Noah of the waters." In Sanscrit, Manu later came to mean "mankind."

The most ancient man in the *Germanic* tribes was called *Mannus. Mannus* was also the name of the *Lithuanian* Noah.

In the Hebrew, "karat" is the same as "Armenia." The prefix *Ar* means mountain, so "Armenia" probably means *the mountain of Meni.* According to Genesis 8:4, Noah landed somewhere in the Ararat mountains.

The legendary founder of the first *Egyptian* dynasty was *Menes;* and *Minos* was the man who is said to have been the first man of Crete. The nearby Greeks said that *Minos* was the son of their god, Zeus, and the ruler of the sea.

The *English* (as well as all *Germanic)* words for man comes from the Sanskrit, *manu.*

The *Egyptian* god, *Nu* was the god of waters who sent a Flood to destroy mankind. They identified Nu with the rain and the atmosphere. Summerians taught that *Anu* was the god of the atmosphere. The rainbow they called "the great bow of Anu."

In ancient *Africa,* the king in the Congo was called *Mani Congo.* Later, *Mani* became the title of respect given to all leading men of

the country.

In *Japan,* manu became maru, a name included in most Japanese ship names. *Chinese* mythology taught that *Hakudo Maru* came down from heaven to teach men how to build ships. **We know that Noah was the first shipbuilder and that all ancient and modern hulls are basically designed in the same manner. The ancient boats were copied from an archtype. The Ark was the great pattern boat.** Men who had to traverse the coasts of the new oceans knew that, nestled in the mountains of Ararat, was a boat which had successfully done it. They carefully copied its structural design.

In *Japanese, Maru* also means a protective circle or enclosure of refuge. The first people to inhabit Japan were called *Ainu,* and *mai* means "original man" in some Australian aboriginal languages.

Among the *North American Indians, manu* became *minne,* meaning "water" for the Sioux; hence our Minneapolis (city of water) and Minnesota (sky-blue water). *Minnetoba* (our Manitoba, Canada) meant "water prairie" to the Assiniboines.

In *South America,* we find the Nahuatl, *managuac* (our Managua, capital of Nicaragua) which means "surrounded by ponds." The fabled city, Manoa (meaning "Noah's water"), was supposed to be the capital of the god El Dorado. A number of important rivers in South America are derived from *manu:* The Amazon (named after the Manau), the Manu in Peru, and also the Muymanu, Tahuamanu, Pariamanu, Tacuatimanu, etc. In all of these, *manu* means "river" or "water."

The *Egyptians* invented their picture writing—hieroglyphics, we call them—soon after the Flood. Their word for water was a wavy line. When the alphabet was later developed, that symbol became the letter "m," for *mayim,* the *Semitic* word for water. It later became the Greek letter *Mu,* the *Roman* letter *Em,* and our *Western M.*

The *Assyrian* name for "rain" was *zunnu.* The *Roman* god, Janus (our January), was originally the *Estruscan* father god of the world and inventor of ships. This could have easily been derived from the *Hebrew* word for "God of Noah" and by the Estruscans,

pronounced *Jah Nu.*

The *Greek* sea-goddess was *naiade,* which meant "water goddess."

The ancient *Norse* of the Scandinavians called their ship god, Njord (Niord), who lived at *Noatun,* the great harbor of the godships. *Noa* in Norse is related to the Icelandic *nor,* which meant "ship."

The original *Sanskrit* word for "ship" was *nau,* which later passed into our English word, *navy, nautical, nausea (sea sickness).*

(We are indebted to Bengt Sage for the above information. See *"Noah and Human Entomology" in Creation the Cutting Edge, pp., 48-52.* The publisher, Creation Life Publishers [Master Books], in El Cajon, California has many, many other excellent books. Write them for a book order sheet.)

THE FLOOD IN CHINESE—According to Harvard's Chinese-Japanese Yenching Library, **written Chinese is dated at approximately 2500 B.C. This correlates closely with the end of the Flood. It is of interest that two of the earliest written languages—Egyptian and Chinese—were both picture writing.**

Because of its ancientness, the pictoral Chinese script has information for us from the very earliest times. In picture writing, it portrays facts recorded in the book of Genesis.

C.H. Kang and Ethel A. Nelson did intensive research into that script and wrote the book, *The Discovery of Genesis: How the Truths of Genesis Were Found Hidden in the Chinese Language.* This is a fascinating volume, one you will want to read for yourself. Here are a few insights from the book:

(1) The Chinese character for ***Devil*** is formed from three other characters: ***man, garden,*** **and** ***private*** (Genesis 3:1-7).

(2) ***Tempter*** is a combination of three words: ***devil, cover,*** **and** ***tree*** (Genesis 3:1-6).

(3) ***Righteousness*** combines ***sheep, I or me,*** **and** ***hand*** *(Genesis 4:2-5).*

(4) The Chinese word for ***total*** is a uniting of ***eight people*** **who** ***join hands*** **over** ***the earth*** (Genesis 7:7,13; 8:13-16).

CREATION AND THE FLOOD IN CHINESE—In very early times, events from the Creation and Flood were interwoven into the picture writing of this ancient written language.

CREATION AND THE FLOOD IN CHINESE

Chinese is one of the most ancient scripts in existence. There is something about the Chinese personality that those conscientious people have consistently chosen to remain very close to the traditions handed down from earlier times. Especially is this so in their written script. Because of that, written Chinese contains the story of Creation, the Garden of Eden, the Fall of Adam and Eve, and the Flood story.

When the Chinese decided to put their language into writing, they used picture writing as did the other earliest writing civilizations. But, in the case of the Chinese, their word structure was conducive to telling stories! They would devise one word, another, and then a third; then put the three words together to make a fourth. Those three words equaling that fourth told a story, and it can be read today in the Chinese language.

An **OUTSTANDING** book dealing with this topic is: *C.H. Kang and Ethel R. Nelson, The Discovery of Genesis: How the Truths of Genesis Were Found Hidden in the Chinese Language (1979), Concordia Publishing House, St. Louis.*

For example, eight mouths (eight people) inside a container—is the Chinese name for ***boat.*** The word for ***empty*** is made up in this way: eight people under one roof equals a ***cave.*** The word cave and work together produces the word ***empty.*** This would indicate that when Noah and his family left the Ark, they at first moved into a cave for shelter. Leaving the cave, day after day, and after a sizable amount of work, they finally emptied the Ark of all that they wanted from it. They later told and retold their experiences to their descendants of several generations.

Here are a few samples from this book; many, many more are to be found within its pages. You will want to obtain a copy of the complete book for yourself.

手 + 戈 = 我 + 羊 = 義
hand lance me sheep righteousness

土 + 口 + 亻 + 口 = 園
dust breath two persons enclosure garden

舟
vessel

丿 + 田 + 儿 + 厶 = 鬼
[motion] garden man privately devil

八
eight

丿 + 田 + 儿 + 厶 = 鬼 + 林 + 宀 = 魔
[motion] garden man privately devil trees cover tempter

口
mouth

林 + 女 = 婪
trees woman desire, covet

八 + 廾 + 一 = 共 + 氵 = 洪
eight united earth total water flood

船
boat

八 + 冖 = 穴 + 工 = 空
eight roof cave work empty

(5) ***Boat,*** in Chinese, brings together three words into one. The three words are ***vessel, eight,*** **and** ***mouth*** (Genesis 7:7, 13; 8:13).

(6) ***Rebellion*** **and** ***Confusion*** have the same script: a linking together of the words for ***tongue*** **and** ***walking*** (Genesis 11:4-9).

(7) One example of the unusual discoveries is ***Garden or Field*** which is a square. Inside the square are four straight lines radiating outward in a "plus sign" shape. According to Genesis 2:9-14, **a river flowed outward in four streams and watered the entire garden**.

Kang and Nelson revealed dozens of other Chinese words suggesting a relationship to Genesis. You will find the entire book very interesting. (In 1997, Dr. Nelson, Dr. Ginger Tong Chock, and Richard E. Broadberry released *God's Promise to the Chinese,* a book which updated the study using oracle bone characters, the most ancient Chinese writing known.)

As they arrived in their new home, after the scattering from the tower of Babel, and formulated their picture writing, **the Chinese placed in their "picture words" recollections of those important earlier events: the Fall of Man, the early sacrificial system, the worldwide Flood, and the Tower of Babal. These are four of the outstanding events described in Genesis 3 to 11.**

You may recall our earlier mention that **the Chinese recorded the solar eclipse of 2250 B.C., the earliest exact historical date in history and confirmed scientifically** (see chapter *4, Age of the Earth).* **Biblical records indicate the Flood occurred very close to that time.**

THE SIZE OF NOAH'S ARK—Based on the Hebrew cubit of 18.5 inches [563.88 cm], it has been estimated that **if that great boat—the Ark—was only one-half the size stated in Genesis 6:14-16—and omitting water creatures—it could still have held two or seven of each basic kind of animal and bird. The remainder of the boat was probably used for food storage.** But that estimate is based on the smaller Hebrew cubit in the dimensions of the Ark. However, it is very likely that Moses used the cubit *of his* time—the Egyptian cubit—when giving the dimensions of the Ark. This would make that giant boat even larger. Here is the data:

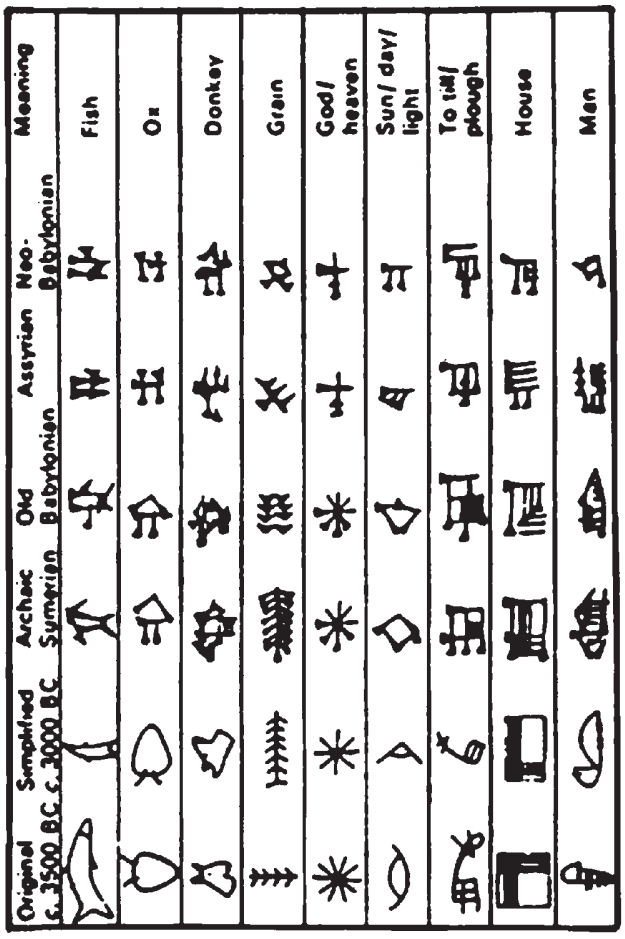
According to Genesis 6:15, the Ark was 300 cubits long, 50 cubits wide, and 30 cubits high. The *Babylonian cubit* was 19.8 inches [603.504 cm], the later *Hebrew regular cubit* was 17.5 inches [533.4 cm], and the *Egyptian cubit* was 20.65 inches [629.12 cm].

Based on the Hebrew cubit, the dimensions of the Ark would have been 437.5 feet [1,333 dm] long, 72.92 feet [222 dm] wide, and 43.75 feet [133 dm] high. With three decks in the Ark, it had 95,747 square feet [29.18 dkm^2], and a total volume of 1,395,734 cubic feet [39,499 mt^3]. Its cubic tonnage would be 13,960 [1042 mt^3].

Based on the Egyptian cubit **used in the time of Moses**, the measurements of the Ark would be **516.25 feet** [1,573 dm] **long, its width would be 86.04 feet** [262 dm] **wide**, and **its height would be 51.625 feet** [157 dm]. On this basis—with three stories—**its square footage would be 1,332,545 square feet** [123,793 m^2] , **and its volume would be 2,293,087 cubic feet** [64,894 m^3]. **Its cubic tonnage would be 22,930** [17110 mt].

The Ark was a barge, not a ship with sloping sides, so it had a much larger carrying capacity. It has been reckoned that, even if measured by the smaller 18.5-inch [563.88 cm] cubit of later times, the Ark would have been so huge that 522 modern railroad box cars could have fitted inside it! One each of every species of air-breathing creatures in the world today could be comfortably carried in only 150 box cars.

For 4,000 years after the Ark was constructed, ships rarely exceeded 150 to 200 feet [457-6,096 dm] in length. **It was not until 1854 that a ship was built with a longer length than the Ark: the *Eturia*,**



SUMERIAN WRITING

Sumerian was one of the very earliest written forms. The Sumerians lived in the plains of the Fertile Crescent, below the Ararat Mountains where the Ark came to rest at the end of the Flood. Shortly thereafter, people moved farther south into Egypt and began another picture writing: hieroglyphics. Still others moved eastward, and the Chinese began their picture-like writing, which is also one of the most ancient of language scripts. Within a few centuries, simplified scripts began to be used, such as the Greek and Roman alphabets.

a Cunard liner constructed in England. It was not until after World War II that ships were built which had a larger volume and cubic tonnage—the ocean-going oil supertankers.

FLOOD CHRONOLOGY—In a chapter of this nature, we should provide the Biblical dating of the Genesis Flood. **Although it is impossible to provide exact dates, in accordance with conservative Biblical chronology, Creation occurred at approximately 4004 B.C.** (2,000 years before the birth of Christ). **The Flood began 1656 years later** (1656 A.M. *[anno mundi* - year of the world]**, which would be approximately 2348 B.C.** That is the closest approximation we can arrive at.

Here, according to Genesis 7 and 8, is a brief chronology of events during the Flood. (The following figures are based on a thirty-day month):

***40 days*—**Rain fell for forty days (7:4, 12, 17).

***110 days*—**The waters rose and reached their greatest height at some time during or at the close of another 110 days (Genesis 7:24).

***74 days*—**The "going and decreasing" of the waters occupied 74 days, then the tops of the mountains were seen (8:5, note the margin).

***40 days*—**Forty more days passed and then Noah sent out the raven (8:6-7).

***7 days*—**Seven days elapsed and then Noah sent out the dove for the first time, but the "waters were still on the face of the whole earth" (8:8; *cf.* 8:10, "other seven days").

***7 days*—**Seven days later, the second dove was sent out the second time and found the olive leaf, because "the waters were abated" (8:11).

***7 days*—**After seven more days, the dove was sent out a third time and did not return, because "the waters were abated" (8:12).

29 days*—The total so far is 285 days,* but comparing the dates in 7:11 with the next event in 8:14 *yields a total of 314 days.* During that additional 29 days, Noah waited until "the waters were dried from off the earth" to remove the covering from the Ark. By that time the raven ceased to "go to and fro" (8:7).

***57 days*—**From the time when the covering of the Ark was removed, to the day they and the animals left the Ark, 57 more days elapsed. When the "earth" was adequately "dry," Noah left the Ark (8:14).

371 days*—From the time that the rain first began falling until the Ark was vacated, would be a total of 371 days.*

Some suggest that the Flood waters reached their maximum height in 40 days while others think that they continued to rise for

the first 150 days.

The fresh olive leaf (which was found shortly after the Ark beached in the Ararat Mountains) would have had as much as four months to sprout from an asexually propagated olive branch buried near the surface of the soil.

CREATION STORIES—Before concluding this section, it is of interest that, **not only are Flood stories found worldwide, but Creation stories are also. In both we find parallels to the accounts given in Genesis.** We would not have room here to discuss this; but, for example, man was created from clay, and there was an ominous serpent that caused mankind great trouble. It is frequently thought to have been winged.

> "An extraordinary number of religious traditions among diverse peoples—Jews, Christians, Moslems, Native Americans, Polynesians, Austrahari aborigines—describe living things as having been originally shaped from clay."—**R. Milner, Encyclopedia of Evolution (1990), p. 84.*
>
> "Dragon legends have persisted for centuries in Norse epics, medieval English ballads, Wagnerian operas, Japanese art and Chinese folktales."—**Op. cit, p. 145.*

3 - CONDITIONS BEFORE THE FLOOD

What were conditions like prior to the Flood? There are several pre-Flood evidences that we find today:

WARMER CLIMATE—Fossil-bearing rocks from all "ages" reveal that **a worldwide warm climate once existed, with no distinct climatic zones such as we now have.** For example, **palm trees and giant ferns grew in the far north and far south.** These were buried at the time of the Flood, revealing what the local climate was like prior to that time.

> "It has long been felt that the average climate of the earth throughout time has been milder and more homogenous than it is today. If so, the present certainly is *not* a very good key to the past in terms of climate."—**R.H. Dott and *R.L. Batten, Evolution of the Earth (1971), p. 298.*

Prior to the Flood, **the climate worldwide was warm and uniformly pleasant.**

"In those days [when the dinosaurs lived] the earth had a tropical or sub-tropical climate over much of its land surface, and in the widespread tropical lands there was an abundance of lush vegetation. The land was low and there were no high mountains forming physical or climatic barriers."—*E.H. Colbert, "Evolutionary Growth Rates in the Dinosaurs," in Scientific Monthly, August 1949, p. 71.*

"Climatic conditions were then much more uniform over the earth than now. Considerable limestone formations, of Cambrian age at high latitudes, indicate strongly that they were there deposited in relatively warm or temperate waters."—*W.J. Miller, An Introduction to Historical Geology (1952), p. 116.*

"The general distribution and character of the rocks and their fossil content point to more uniform climatic conditions than those of today. Fossils in the Arctic rocks are not essentially different from those of low latitudes."—*Op. cit., p. 143.*

"In the case of the Devonian, such evidence is indicative of a worldwide mild climate."—*O.D. von Engeln and *K.E. Caster, Geology (1952), p. 596.*

"As for the earlier Paleozoic periods, the character and distribution of Mississippian fossils rather clearly prove absence of well-defined climatic zones like those of today."—*W. J. Miller, An Introduction to Historical Geology (1952), p. 169.*

Even evolutionists recognize that coal was formed from deposits of massive amounts of vegetation, primarily trees. It is now known that **large coal deposits exist today in the continent of Antarctica. This is another evidence of an earlier, worldwide warm climate.**

"There would have been no white polar caps or reddish-brown desert regions, for thick green vegetation covered almost all of the land areas, even in polar regions (thick coal deposits have been discovered in the mountains of Antarctica)."—*John C. Whitcomb, Early Earth (1986), p. 22.*

The Antarctic once had an abundance of vegetation and large trees, as is shown by "widespread discoveries of coal and petrified wood." **The Arctic regions were once tropical:**

"Geologists mine coal for science in . . the Horlick Mountains [of the Antarctic]. The Ohio State University scientists found coal that dates from the Permian Period, about 250 million years ago, when Antarctica had a comparatively warm climate." "Five geologists last year drilled and blasted 20 feet to bring out virtually unweathered Antarctic coal. Widespread discoveries of surface coal

and petrified wood show that Antarctica had luxuriant vegetation 250 million years and more ago."—**D.M. Tyree, "New Era in the Loneliest Continent," Natíonal Geographic, February 1963, pp. 288, 296.*

"Baron Toll, the Arctic explorer, found remains of a saber-toothed tiger and a 90-foot [274 dm] plum tree with green leaves and ripe fruit on its branches over 600 miles [966 km] north of the Arctic Circle in the New Siberian Islands. Today the only vegetation that grows there is a one-inch high willow."—*Joseph C. Dillow, The Waters Above (1982), p. 346.*

"Fossil plants found by Chilean scientists on King George Island puts Antarctica's ancient past in a temperate clime. Further proof of the continent's warm ancestry lies in its coal, the transformed remains of forests long dead."—**W.R. Curtsinger, "Antarctica's Newer Side," National Geographic, November 1971, p. 653.*

"Dr. Jack A. Wolfe, in a [1978] U.S. Geological Survey Report told that Alaska once teemed with tropical plants. He found evidence of man-groves, palm trees, Burmese lacquer trees, and groups of trees that now produce nutmeg and Macassar oil."—**Op. cit. p. 348.*

WATER VAPOR—<u>What produced the changeover from a worldwide warm climate to our present climate zones that vary between very hot to icy cold</u>? <u>It was probably a change in the earth's atmosphere</u>.

There are three factors in the atmosphere that provide us with whatever greenhouse-type climate we have today: *ozone, carbon dioxide,* and *water vapor*. If, prior to the Flood, one or more of these were more abundant in the air above us, a profound change in our worldwide climate would occur. **<u>The most powerful of the three is water vapor. Indeed, a lot of the water in our present oceans came out of the skies at the time of the Flood</u>!**

A universal water-vapor blanket must have covered our planet in ancient times. It is called the ***"vapor canopy."*** The evidence is clearly available that tropical plants were once in the far north and south. **Only a great increase in encircling water could possibly explain that earlier worldwide warm climate.**

"An increase of water vapor . . would raise the temperature of the earth's surface . . and would increase the temperature of the air at a height of four or five miles [6-8 km] more than that at the

surface, and so lessen the decrease of temperature with height."—*C.E.P. Brooks, Climate Through the Ages (1949), p. 115.*

Apart from a massive increase in pre-Flood water vapor, the situation we find in the rock strata is unexplainable.

"There is little evidence that climatic belts existed in the earlier history of the earth, yet climatic zonation, both latitudinal and vertical, is clearly apparent in all parts of the earth today. This anomalous situation is difficult to explain.

"It is impossible to reconstruct a super-continent which could lie entirely within one climatic regime. Any rotating planet, orbiting the sun on an inclined axis of rotation, must have climatic zonation. It is obvious, therefore, that climatic conditions in the past were significantly different from those in evidence today."—*Edgar B. Heylmun, "Should We Teach Uniformitarianism?" in Journal of Geological Education, January 1971, p. 36.*

"The principle atmospheric absorber for the entrant sunlight is water vapor. Absorption by ozone being a minor factor qualitatively, the other gases are virtually transparent. Absorption of the outgoing radiation from the earth is again largely due to water vapor, with carbon dioxide and ozone playing lesser roles . . The part absorbed tends to warm the atmosphere, and just as the warm glass of the greenhouse tends to raise the temperature of the interior, the water vapor tends to raise that of the earth's surface below it. This surface, or any object on it, is constantly exchanging radiation with the water vapor in the atmosphere, so the temperature of the surface is closely dependent upon the amount and temperature of this vapor."—*Harold K. Blum, Time's Arrow and Evolution (1951), p. 57.*

"Calculations show that a 50-percent decrease in the amount of carbon dioxide in the air will lower the average temperature of the earth 6.9 degrees Fahrenheit. We can be reasonably sure that such a sharp drop in temperature would cause glaciers to spread across the earth."—*Gilbert N. Plass, "Carbon Dioxide and Climate," in Scientific American, Vol. 201, July 1959, p. 42.*

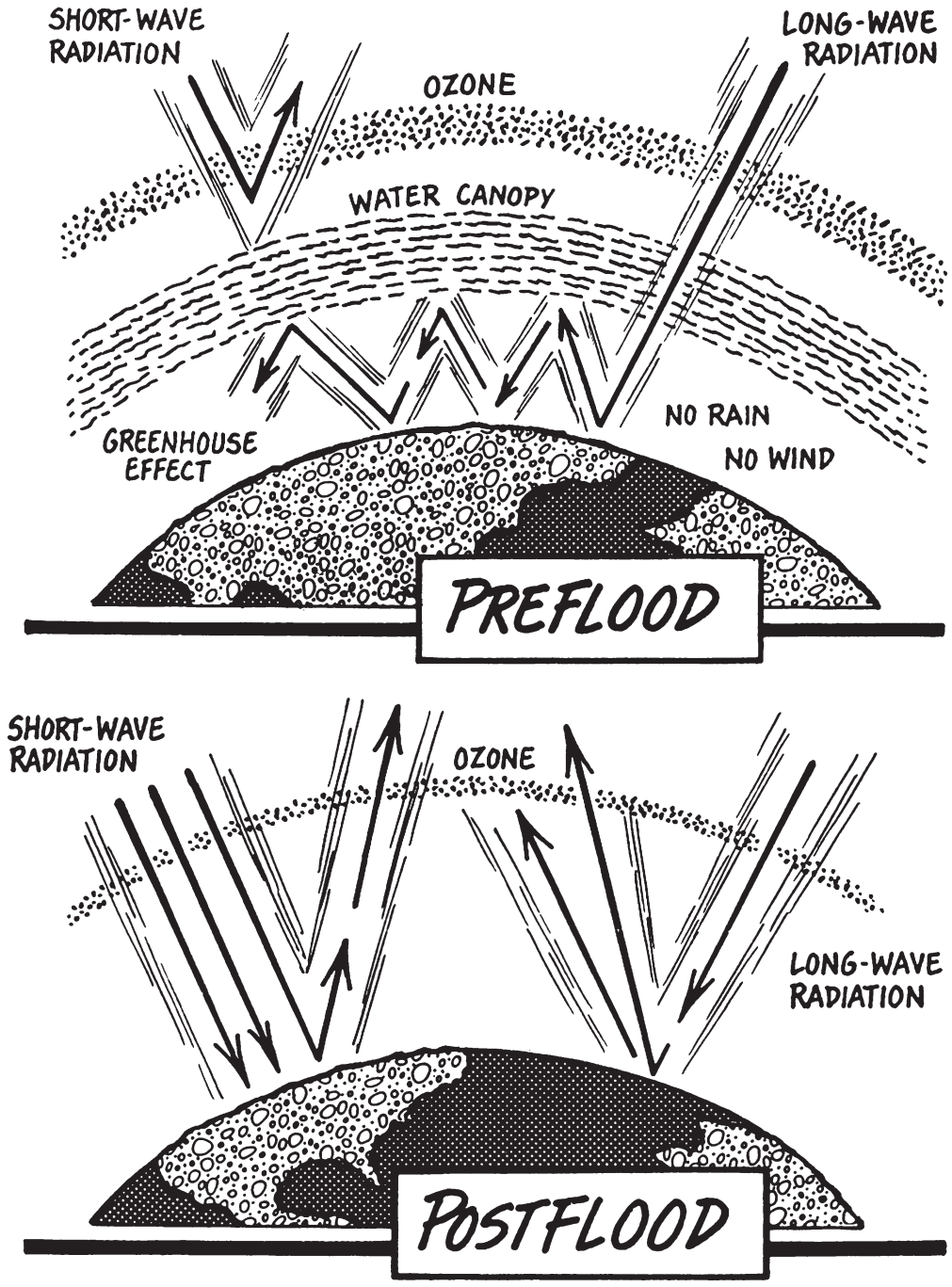
It has been suggested that our planet was not inclined 23° prior to the Flood. But, if the earth was not then on an inclined axis (which may well not be true), worldwide yearly temperatures would be even more extreme than now! **The only solution to the problem is that a sizeable portion of the water in the oceans was once in the skies overhead.**

LOWER SEA LEVELS—<u>Before the Flood there were probably only broad rivers. The enormous concave ocean basins</u>

THE VAPOR CANOPY—The pre-Flood atmosphere contained an immense amount of moisture, which made the entire planet warm.

THE WATER CANOPY

The immense loss of water vapor from the skies at the time of the Flood greatly affected our world.



we have today—in some places over five miles [8 km] deep—were not needed then. The entire earth must, indeed, have been very beautiful.

There are several lines of evidence that tell us that, at some earlier time, the ocean basins FILLED with water. Here are some of them:

(1) Seamounts were first discovered by a naval captain during World War II. As a personal research project during trips back and forth across the Pacific, Harry H. Hess, commander of an attack transport, the U.S.S. *Cape Johnson,* kept his deep-water echo sounder turned on all the time. Continuous profiles of the sea bottom were recorded on graph paper. Analyzing the data, he discovered **extinct volcanoes hundreds of feet beneath the sea with their tops flattened off.**

None of them broke the surface of the ocean. The name *"seamounts"* was given to these formations. (An alternate name for them is *"guyots."*) What could have caused them?

Volcanic activity began before the Flood ended. The volcanoes in the basin of the ocean, which became extinct before the seas had filled, **had their summits eroded away—flattened out—by storm and wave action as sea level reached those summits. The oceans kept filling and the horizontal tops became submerged, some distance below the surface.**

This would also explain some of the coral atolls in the Pacific. Coral only grows near the surface, yet **the remains of earlier coral are to be found deeper in the ocean.** It has been said that low-lying and partially or totally submerged volcanoes, in the center of these coral formations, probably sunk at some time in the past. That is possible. Or **they could have been covered by the rising ocean.**

Oceanic volcanoes could also have blown their tops, as Krakatoa did a century ago; but such explosions would not lower the tops as far down as they presently are, nor would they flatten the tops. **As the oceans neared their present level, infilling would slow and coral would have time to build atolls above those particular guyots.**

(2) ***Similarities between plants and trees of now widely separated areas*****. Vegetation in Brazil has a number of remarkable similarities to that of western Africa.** Climatic conditions may be the sole cause of this similarity of vegetation on separated continents. But the possibility that **the South Atlantic in ancient times may not have existed as a broad ocean** could also be a factor.

It is clear that remarkable evidence of a former worldwide Flood is abundant. Wherever we turn we encounter new insights into its effects. A sizeable amount of additional evidence will be found in the appendix (at the back of this chapter, *Effects of the Flood,* on our website). The Whitcomb and Morris book, *The Genesis Flood,* will also provide you with much additional scientific data on this topic.

4 - EFFECTS OF THE FLOOD

With the exception of its initial Creation, our world has been changed more by the Flood than by any other event in the history of this planet. There is hardly a place where you and I can look, which has not been drastically affected by the Flood and its immediate aftereffects: the deserts, the seas, the river canyons, the hills, the plains, and the mountain ranges. ***Here are several examples of these effects:***

CONTINENTAL SHELVES—The continental shelves that surround all the continents on the globe are another evidence of a lower—or a gradually rising—sea level at some earlier time. **These are ledges protruding out from land beneath the oceans.** From the *shoreline* at the edge of the continents, the sea slowly becomes deeper for a number of miles. This outward extension can be as much as 750 miles [1206.9 km], but the average width is about 42 miles [67.59 km]. Then, **at a definite, higher *first point,* it descends gradually to a lower *second point* which has a maximum depth of about 300 feet [914 dm] to about 1500 feet** [1,310 dm], with a mean depth of about 430 feet [4,572 dm]. Beyond this second point, it then descends more rapidly to the *sea bottom.*

Here are four possibilities for the origin of continental shelves:

(1) The *first or second point* of sudden change may mark the *ancient sea level.*

(2) **The *second point* may also mark the *freeze point,* the place where the gradually filling sea greatly slowed for a time as the rapidly obscuring volcanic dusts in the skies caused the polar areas to begin capturing large quantities of water and transform it into thick masses of ice.** During that time of slower infilling, gigantic waves and storms could have eroded out massive sections.

Above the first point where the drop is much more shallow, the storms of the main Flood may have subsided and the gentler seas may have caused less erosion as infilling was completed.

(3) **The *first point* edge of the shelves may also mark the *point of orogeny* (mountain building), the point where the continental blocks began uplifting and**/or the—what is now **marine—blocks lowered** as the result of fault slippage.

(4) The water in the oceans rose to a certain height. Then, later, **at the *time of glacial melt,* as the ice sheets melted, this water flowed into the seas and brought the water level up to its present height**.

Those are the possibilities; but however it may have happened, **it took the Flood to produce the continental shelves.**

> "The ocean basins can thus be characterized as overfull—water not only fills the ocean basins proper [coming up to the continental shelves], but extends out over the low margins of the continents [overflowing the shelves]."—**J.V. Trumbull, et al., "An Introduction to the Geology and Mineral Resources of the Continental Shelves of the Americas" in U.S. Geological Survey Bulletin 1067 (1958), p. 11*.

> "Perhaps the ocean volume increased enough to explain most of the relative sinking of the seamounts. If the latter idea is correct, something on the order of a 30 percent increase in the volume of the oceans must have occurred during the last 100 million years."—**Edwin L. Hamilton, "The Last Geographic Frontier: The Sea Floor," in Scientific Monthly, December 1957, p. 305.*

Later in this chapter, in the paragraph section *"Mountain Building,"* **indication is given that the mountains and continents rose both during the latter part of the Flood *(late Pliocene)* and**

again just after it *(Pleistocene)*. This twofold uplift might help explain the two continental shelf point pauses in rising ocean levels.

SEAMOUNT CORALS—*Coral* and *foraminifera* are small plants containing sizeable amounts of calcium, **which grow close to the surface of the sea**. Deposits of these small creatures have been found on the flat-topped seamounts. **At some earlier time coral were growing on those deeply submerged seamounts! This is an important point, since coral cannot live below a depth of 200 feet** [609 dm]. At some earlier time, the sea must have been far below its present sea level.

The 100 million year estimate, given by *Hamilton in the above quotation, is based on the fact that coral can only live and grow near the ocean's surface. Evolutionary theory has assigned those deposits to the late Cretaceous or early Tertiary, but **a sudden infilling of water by the Flood could answer the point just as well. It is of interest that a full 30 percent of the oceans lies above those coral deposits on the submerged seamounts!**

> "For some reason that is not known, probably having to do with isostatic adjustment or subcrustal forces, the whole great undersea range sank and, initially, sank fast enough to kill the reef coral when the coral dropped below its life zone of upper water."—**Op. cit., p. 303.*

Evolutionists think that the cause was a lowering of the ocean basins. But that solution would only add 7 percent more water to those oceans! Something more beside seafloor sinking is needed.

Submarine canyons **are yet another evidence that lower seas gradually filled** and became our present large oceans. We will discuss these canyons later in this chapter.

ORIGIN OF THE OCEANS—The Flood, described in Genesis 6-9, has had more profound effects on our planet than probably any other single event since its initial creation, with the exception of the fall of man. An astounding example of this is the vast oceans which surround the continents on every side.

With our present continents and deep ocean basins, if all the water in our present atmosphere were to suddenly fall as rain, it would cover the entire surface of the globe to an aver-

age depth of only two inches *(*C.S. Fox, Water, 1952).* Prior to the Flood, we apparently had a far greater amount of moisture in the atmosphere. That would have given a more uniformly warm climate to the entire world, and would explain why fossils of tropical plants have been found in the far north and south. **Massive amounts of water poured out of the skies. In addition, large amounts of water apparently were released from within the earth.** Because of that, we now have so much water in our oceans that, **if the land were leveled out, "the Earth would be completely covered by water about 0.75 mile [1.2 km] deep"** *(Creation Research Society Quarterly, June 1987, p. 27).* Another estimate figures it at 1.7 miles [2.7 km]: *CRSQ, September 1987, p. 54.*

There are evidences that much of the present sea bottom was once dry land:

> "There are fossil landforms preserved in the depths of the sea, where they are disturbed only by light currents and the slow rain of pelagic material from the waters above."—**E.L. Hamilton, "The Last Geographic Frontier: The Sea Floor," in Scientific Monthly, December 1957, p. 303.*

Immense upheavals as well as sinkings of land must have taken place in order to provide a place to hold the oceans. If that had not occurred, the entire earth today would be under water and there would be no continents. Very frankly, this was an act of Divine providence. The ocean basins had to sink and the continents rise—or there would be no dry land after the Flood.

By the end of the Flood year, recorded in Genesis 7 and 8, **"the valleys [basins] sank down"** and the great masses of **water which "were standing above the mountains" "fled" and "hurried away . . to the place which Thou didst establish for them. Thou hast set a bound [the shorelines] that they may not pass over**; that they return not to cover the earth." *Psalm 104:6-9.*

SUBMARINE CANYONS—Another relic of the Flood is **the great canyons cut into the ocean floor. These are to be found just below where each of our major rivers dumps into the ocean.** Known as *"submarine canyons,"* **those canyons could only have been made if the floor of the ocean basins sank, the ocean level**

was then lower, and was gradually filled by rain from the skies and by water pouring down into it from these waterways. One example is the canyon in the ocean just opposite the Hudson River in New York.

The evolutionary position, that the oceans did not fill, leaves them no solution to the origin of submarine canyons.

> "The difficulties encountered in explaining the lowering of sea level necessary for the canyons to have been cut by streams [with a volume of water such as we have today] seem insurmountable . . If Tolstoy's conclusion that Hudson Canyon extends down to a depth of 15,000 feet [4,572 m] [!] is correct, the magnitude of lowering of sea level to permit subaerial canyon cutting seems beyond any possibility of realization."—**William D. Thornbury, Principles of Geomorphology (1954), p. 472.*

You will find these diagonal canyons, cut into the continental shelves, out beyond the mouths of all the great rivers of the continents: the Colorado, Columbia, Amazon, etc.

Such colossal river currents could not run downward, if the oceans were earlier at their present height. Scientists cannot account for those canyons. Some suggest "turbidity currents," as the answer while others recognize that something far greater was involved.

> "Can we, as seekers after truth, shut our eyes any longer to the obvious fact that large areas of sea floor have sunk vertical distances measured in miles."—**Kenneth K. Landes, "Illogical Geology," in Geotimes, March 1959, p. 19.*

Brown discusses their immense size and significance.

> "On the ocean floor are several hundred canyons. Some of these *submarine canyons* rival the Grand Canyon in both length and depth. One canyon is three times deeper than the Grand Canyon. Another is 10 times longer, so long that it would stretch across the United States. Many of these V-shaped canyons are extensions of major rivers. Examples include the Amazon Canyon, the Hudson Canyon, the Ganges Canyon, the Congo Canyon, and the Indus Canyon.
>
> "How did they get there? What forces could gouge out canyons that are sometimes 15,000 *feet below sea level?* Was the ocean floor raised or the ocean surface lowered by this amount so ancient rivers could cut these canyons? If so, how? Canyons on the continents were supposedly formed by the cutting of fast flowing rivers and surface drainage. However, the [current] flows measured in submarine canyons are much too slow—generally less than one mile

per hour. Frequently the flow is in the wrong direction. Submarine landslides or currents of dense, muddy water sometimes occur. However, they would not form the long, branching (or dendritic) patterns that are common to river systems and submarine canyons. Besides, experiments with mud-laden water in actual submarine canyons have not demonstrated any canyon-cutting ability."—*Walter T. Brown, In the Beginning (1989), p. 63.*

HIGHER LAKES—It is quite clear that **at some earlier time there was much more water in the enclosed lake basins of the continents.**

Anyone who has ever driven into the Salt Lake City area cannot help but notice the high-water marks on the surrounding mountains. Four distinct marks are to be seen, the highest of which is about 1,000 feet [3,048 dm] above the present level of Great Salt Lake. At some earlier time an area of 20,000 square miles [51,798 km^2] was covered by this ancient lake (scientists call it *"Lake Bonneville").*

Another basin of an ancient lake *("Lake Lahontan")* is to be found in Nevada; it once filled 8,400 square miles [21,755 km^2]. *Flint, in *Glacial and Pleistocene Geology,* lists **119 ancient lakes which are now dry or nearly so.**

Such raised beaches and terraces formed by ancient lakes are to be found all over the world.

"There are many examples outside the United States of similar lake expansions during pluvial glacial times. Lake Texcoco in Mexico was at least 175 feet [533 dm] higher than it is now; Lake Titicaca in South America was 300 feet [914 dm] higher; the Dead Sea was 1400 feet [4,267 dm] higher, and as many as 15 abandoned strand lines have been observed around it; the Caspian Sea was at least 250 feet [762 dm] higher and was apparently confluent with the Aral Sea to the east and the Black Sea to the West."—**W.D. Thornbury, Principles of Geomorphology (1954), p. 418.*

LARGER RIVERS—There was also a far greater volume of water flowing at some earlier time in the rivers. It is common today to see small streams flowing between the steep, high sides of large canyons. Obviously, at some earlier time gigantic waterways must have flowed there for a time. In addition, **extensive deposits of sediments *(alluvium)* left by these ancient rivers are to be found at higher levels.**

We consistently find valleys with small streams in their center, with evidences that once a very large river coursed down the center of the valley.

> "If a stream, or more correctly the size of the stream meanders [the serpentining of the stream back and forth within its base floodplain], is too small for the size of the valley, the stream is said to *underfit;* if too large, it is referred to as *overfit.* It is difficult to cite examples of overfit rivers, or streams with floodplain too small for the size of the stream. Hence there may well be a question whether overfit streams exist . . The underfit condition can persist indefinitely; hence many examples of such streams exist."—**W.D. Thornbury, Principles of Geomorphology (1953), p. 156.*

> "Valleys commonly appear to be far too large to have been formed by the streams that utilize them."—**O.D. von Engeln and *K.E. Caster, Geology, pp. 256-257.*

Then there are the massive Flood plains, remnants of earlier gigantic river overflows. There is an enormous flat area on both sides of the Mississippi River. This is its Flood plain, and it extends for many miles. In ancient times, this was part of a gigantic river, now referred to as the *"Teays River."*

IMMENSE EROSION AND SEDIMENTATION—*(*#1/6 Water Power*)* **Tremendous quantities of water flowed outward from the land; and it took a lot of soil and sediment with it. In many parts of the world, only sand remains.** This would be but another result of the Flood. We see evidences of it today as we look at our mountains, plains, **deserts**, and **waterways**. Consider the **Grand Canyon** of Arizona.

One important result of all this was the burial of so much vegetation and animal life. There are places in our world where fossil-bearing sedimentary rock is several miles deep. From bottom to top, the sedimentary rock provides fossil evidence of a gigantic yet rapid catastrophe. Prior to the Flood this sedimentary strata did not exist.

WAVE EROSION—Water is powerful, not only when it is running but, when it strikes a surface head on. Ocean waves can be very destructive, as we are told by Rachel Carson in *The Sea Around Us.* *King also mentions this:

> "Waves are seldom more than twenty-five feet high; but violent

storms may raise them to sixty feet, and there are unverified reports of even greater heights . . The immense striking power of a wave cannot be realized until it hits an object that cannot float with it. Waves striking the shores of Tierra del Fuego can be heard for twenty miles [32 km]. Spray from a storm wave has been hurled to the top of a lighthouse nearly 200 feet [609 cm] above sea level. The force of waves striking the shore can be measured, and has been found to reach three tons per square foot [2.7 mt per .09 m^2]."—**Thomson King, Water (1953), p. 49.*

Terrible storms raged during the Flood. Immense quantities of water were flowing, grinding, wearing away surfaces. Massive wave action took its toll also. **All this resulted in an astounding rate of erosion, which produced sediments which resulted in the thousands of feet of sedimentary rock strata which we see today.**

ROCK STRATA—Several evidences in the sedimentary rock strata indicate that the sedimentary rock strata were all laid down rapidly at one time, thus indicating a single worldwide Flood occurred.

(1) Sedimentary rocks, sometimes deep ones even down to the Cambrian, are in an unconsolidated state. That is, they have not been pressed together into solid rocks. Yet if these stones had been lying under millions of tons of overrock for millions of years, they would long ago have consolidated.

(2) The fossils and the rock strata indicate rapid deposition, due to a sudden worldwide Flood, rather than being slowly laid over a period of long ages. We discussed this in detail earlier in this chapter in the section, *Fossils and Rock Strata*. There are thousands of cubic miles of such materials; yet hardly any of it is being made today. The entire process took place rather quickly at some past time.

(3) The strata are confused and often crushed. If slow, uniform layering occurred as a result of erosional forces, the layers would also be uniform and fairly flat. As it is, what we see is the result of a terrific upheaval.

(4) Geologists well-know that **rivers only cut through hard materials when they rush fairly straight down steeply slanted surfaces. In contrast, rivers that meander serpentinely are slow-**

moving waters going through more level land and can then only cut through softer materials. But what we find is evidence that, **at some past time, meandering cut through, what is today, thick rock**—at such locations as the Colorado River, in the Grand Canyon of Arizona, and the San Juan River in Colorado.

Such river canyons were not cut by rivers "over millions of years," but instead were quickly cut through while they were still soft and their strata had only recently been laid.

VARVE DATING—"Varved clays" are banded sediments, with each band quite thin with light and dark color gradations between them. "*Varve chronology*" is another evolutionary means of dating the sediments, for **evolutionists theoretically interpret each varve as an annual (one year) deposit.** But **we find pebbles, plants, insects, and dead animals in the varves**. How does one explain a dead fish lying on the bed of a lake for about two hundred years without rotting while the slowly accumulating sediments gradually cover it and then fossilize it? Where does this occur in modern lakes? There is a lot more that could be said on this topic, but the above should be sufficient to disprove the theory of "varve dating."

FACTS ABOUT THE DINOSAURS—Very high up in the theoretical column of rock strata we find the Mesozoic, which includes the Triassic, Jurassic, and Cretaceous. In these levels we find the dinosaurs. Apparently reptilian in nature, many of these were gigantic creatures. **The dinosaurs died as a result of the Flood.**

Evolutionists recognize that they were suddenly destroyed all over the earth and are unable to give a satisfactory reason why.

Scientists are puzzled why there is a dividing point in the sedimentary strata, below which are the dinosaurs and above it no dinosaurs. This line is referred to as the *K/T boundary.*

> "One of the important contemporary scientific debates is about the causes of the mass extinctions at the close of the Cretaceous epoch, about 65 million years ago . . Scientists refer to this crucial, enigmatic transition in the history of life as the *K/T boundary.* The Cretaceous epoch is abbreviated as *K* to distinguish it from the earlier Carboniferous (coal-forming) epoch, abbreviated as *C.* Sedi-

> mentary rock layers above the Cretaceous, which include the fossil record of the Age of Mammals, are traditionally called Tertiary or T.*"—*R. Milner, Encyclopedia of Evolution (1990), p. 246.*

It has been suggested that the dinosaurs were killed by volcanoes, climatic changes, or the eating of their eggs by other animals. Yet far more delicate wildlife have survived volcanoes, climatic changes, and egg predators. **Evolution has no answer to the extinction of the dinosaurs.**

> "These are some of the theories that have been advanced to explain the sudden extinction of dinosaurs throughout the world. Each theory will explain the death of some dinosaurs in some places, but attempts to apply any of them, or combinations of them, to worldwide extinction have failed. This dinosaur story is like a mystery thriller with the last pages torn out. That is true and the paleontologist knows it. He also knows the riddle will probably never be solved.*"—*J.M. Good, *T.E. White, and *G.F. Stucker, "The Dinosaur Quarry," U.S. Government Printing Office (1958), p. 26.*

***Here are two possibilities for the extinction of the dinosaurs*:**

(1) **No dinosaurs were taken onto the Ark.** We have reason to believe that mankind was larger, stronger, and longer-lived before the Flood. It was seen best not to have these giant reptiles wandering over the earth's surface afterward, when mankind would become smaller and weaker. Why would dinosaurs have been taken onto the Ark if they were only going to become extinct not long afterward?

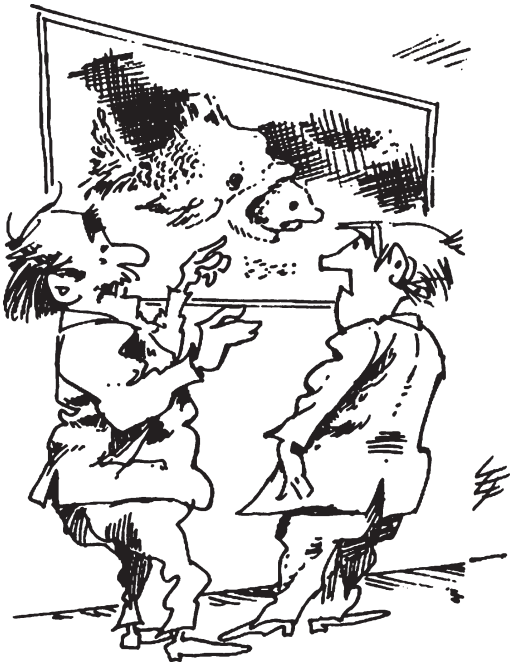
(2) Some Creationists believe that **some young dinosaurs may have been taken into the Ark and died out within a short time after the Flood ended.** Other animals have become extinct after the Flood; dinosaurs could have also. It has been suggested that the cold climate that reigned for a time after the deluge caused them to die out.

A few of the dinosaur-type species were taken onto the Ark. This definitely included crocodiles, alligators, and komodos, and could also have included the young of what today are referred to as "dinosaurs." After the Flood the dinosaurs became extinct while other dinosaur-type creatures, the crocodiles, alligators, and komodos did not. **There is some indeterminate evidence that some dinosaurs were alive for a time after the Flood.**

A provocative recent discovery may provide additional in-

"Some people chase after butterflies for a hobby. But we're scientists; we try to spot moving overthrust mountains."

"Why is there shallow-water coral at the bottom of the sea? It's a conspiracy! Someone is working with the coral to destroy our theory!"



"Maybe the fish got hungry just before it died of old age."

"I'm a real estate agent, and I read about how there used to be mangoes, olives, and avocados here in the Yukon. I want to buy up a lot of this land, so I can make a killing when the weather warms up again."

sight as to the cause of the disappearance of the dinosaurs. One major short-term effect was a rapid cooling after the Flood, caused by volcanic air pollution which kept the warming sunlight from reaching the earth for a number of years.

> "Whatever triggered this decline [in worldwide temperature at some earlier time] may also be a factor in the extinction of the dinosaurs (which were probably adapted to mild and equable climates) and put a premium on the warm-blooded birds and mammals, which can maintain a constant internal temperature."—**Asimov's New Guide to Science (1984), p. 204.*

That worldwide coolness, immediately after the Flood, may have eliminated the dinosaurs by causing their eggs to hatch out all males or all females.

> "Crocodilians and turtles share a special reproductive trait that is not found in any other living group of reptiles. In all other vertebrate species [including snakes], the sex of offspring is determined by genetics; in crocodilians and turtles, it is determined by environment. Amazingly, whether an egg will develop into a male or female depends on the temperature at which it was incubated! Hotter conditions produce females in most turtles, and males in crocodilians. Hatched under lower temperatures, turtle eggs yield mostly males and crocodile eggs females . . This apparently opposite effect may be related to body size; in both cases, high temperatures produce larger individuals. Female turtles are larger than males . . Male crocodilians are the larger sex . .
>
> "[If dinosaurs were heat-sexed like turtles and crocodiles (instead of like snakes which are genetically determined), then] changes in climate could have produced a preponderance of one or the other sex [in dinosaurs], causing genetic bottlenecks and sharp curtailment of breeding. Dinosaurs may have become extinct, then, because their eggs produced too many individuals of one sex.
>
> "Recent studies by Graham Webb in Australia, shows that [turtle] sex ratios are maintained by distribution of eggs in a single nest. The top layer of eggs all developed into males, the middle layers produced a 50-50 ratio of sexes, and the bottom layers all hatched into females."—**R. Milner, Encyclopedia of Evolution (1990), p. 101.*

It is also of interest that **a majority of the larger dinosaurs were vegetarians, and many of the carnivorous dinosaurs preyed upon other dinosaurs.** This would explain why dinosaurs could exist on the earth contemporaneously with man—before the Flood and perhaps after it,—without being a major threat to him.

"Dinosaurs were mostly vegetarians, despite their enormous size and decidedly carnivorous appearance. One exception was the mammoth *Tyrannosaurus rex,* which apparently ate other dinosaurs."—**Asimov's Book of Facts (1979), p. 136.*

Oddly enough, the dinosaurs are often displayed in museums as an outstanding proof of evolution,—when, in fact, they are no proof at all! (1) They were all non-evolving, distinct species, and (2) their sudden disappearance from our planet cannot be explained by evolutionary theories.

As with many animals, the dinosaurs apparently gathered into groups in time of danger. The rising waters of the Flood finally overtook and buried them beneath water and sediment. Today, we find their bones in so-called *"dinosaur graveyards."* **The entombment of such vast numbers of these large creatures demands a terrible worldwide catastrophe.**

The fact that they collected together in the crisis, before dying, indicates that they were drowned by the Flood rather than dying afterward. Tell those you meet that the dinosaurs are another evidence of the Flood and another denial of evolution.

"As the layer [cut out of a New Mexico hillside] was exposed, it revealed a most remarkable dinosaurian graveyard in which there were literally scores of skeletons, one on top of another and interlaced with one another. It would appear that some catastrophe had overtaken these dinosaurs, so that they all died together and were buried together."—**Edwin Colbert, Men and Dinosaurs (1968), p. 141.*

In Wyoming, dinosaur bones were found *"piled in like logs in a jam."* In the Dinosaur National Monument in Utah and Colorado (the Morrison formation of the Jurassic), over 300 dinosaurs of many different types have been dug out.

"Innumerable bones and many fine skeletons of dinosaurs and other associated reptiles have been quarried from these badlands, particularly in the 15-mile [24 km] stretch of river to the east of Steveville, a stretch that is a veritable dinosaurian graveyard."—**Edwin Colbert, The Age of Reptiles, p. 141.*

Evolutionary theory declares that the "age of the dinosaurs"—and the death of the dinosaurs—occurred millions of years before man evolved on this planet. But **there is clear evidence that dinosaurs and humans were living on earth at the same time.** In

chapter 13, *Ancient Man,* we went into detail on the **events at Glen Rose, Texas, where human footprints intermingled with dinosaur tracks in the same stratum of mud—sometimes with human footprints on top of the dinosaur tracks.** This is known as the *Cretaceous Glen Rose formation,* located in flat limestone beds near the small town of Glen Rose, Texas, and is found for some distance along the Paluxy River, west of town. The tracks occur in trails; and, **in two or three instances, the dinosaur and human trails cross each other,—with two known instances in which human and dinosaur tracks actually overlap each other.** Books and films of these tracks have been produced. (See the excellent book, *Tracking Those Incredible Dinosaurs and the People Who Knew Them,* by John Morris, 240 pp.)

There is a simple answer to the question of why dinosaurs are only found in the strata of the Triassic, Jurassic, and Cretaceous—the three divisions of the Mesozoic Era. On the basis of Flood geology, the answer is simple enough: They could run faster than conifers, trilobites, ocean corals, amphibians (such as frogs), plants, and fish, all of which we find in the so-called "Paleozoic Era"; but they had a more lumbering gait than the faster mammals and birds, which we find in the "Cenozoic Era."

MOUNTAIN BUILDING—During the Flood, vast amounts of water came from the skies; yet, according to Genesis 7:20, **the surface of the world did not have high mountains during the deluge.**

(1) **If the Flood had covered the highest mountains we have *today*, there would now be no exposed continents, because there would now be too much water in the world.** (2) **If mountain building had not taken place *after* the Flood, there would be no exposed continents now**, since the waters covered the highest pre-Flood mountains (Genesis 7:20).

Oceans would have forever covered the world if mountain building had not occurred—but providentially it did. (**By *"mountain building,"* we include not only the production of our present mountains and ranges, but also the raising of the continental masses,—which involved the sinking of the ocean basins.**)

The ocean basins of our present world are much deeper than before the Flood, for they must now serve as reservoirs to hold massive amount of water which at that time poured from the skies and burst forth from the ground. Before the Flood, the sky had a thick canopy of "waters which were above the expanse," and the ground had underground channels and aqueducts filled with "the waters which were below the expanse" (Genesis 1:7).

Not only are the ocean basins deeper since the Flood, but **the mountains are higher also:**

Mount Everest is 29,028 feet [8,848 m] above sea level, and the deepest part of the ocean (the Mariana Trench near Guam in the Pacific) is 35,810 feet [10,915 m] deep. **The highest mountain is 5.5 miles [8.85 km] above sea level, and the deepest depression is 6.78 miles [10,914 km] below it!**

Scientists have found abundant evidence of mountain building. They call it *"orogeny."* On the basis of fossil evidence, it is generally believed that **most of our mountain ranges uplifted during the Pleistocene or late Pliocene (both of which occurred shortly after the Flood).** This would agree with Flood events. A leading evolutionist geology expert writes:

> "Despite the fact that references are scattered and the data have never been fully assembled, the worldwide distribution of these movements is striking. In North America late Pliocene or Pleistocene movements involving elevations of thousands of feet are recorded in Alaska and in the Coast Ranges of southern California . . The Alps were conspicuously uplifted in Pleistocene and late pre-Pleistocene time. In Asia there was great early Pleistocene uplift in Turkestan, the Pamira, the Caucasus, and central Asia generally. Most of the vast uplift of the Himalayas is ascribed to the 'latest Tertiary' and Pleistocene. In South America the Peruvian Andes rose at least 5,000 feet [1,524 m] in post-Pliocene time . . In addition to these tectonic movements many of the high volcanic cones around the Pacific border, in western and central Asia and in eastern Africa, are believed to have been built up to their present great heights during the Pliocene and Pleistocene."—**R.F. Flint, Glacial Geology and the Pleistocene Epoch (1947), pp. 514-515.*

Immense crustal movements occurred during the Pleistocene or late Pliocene. Mountains rose and basins sank. Water flowed into those basins, and under its great weight they sank still further. (A similar sinking occurred in Antarctica, which sunk un-

der the weight of miles of ice piled on top of it.)

Rock strata buckled, folded, went up or down, and sometimes was thrust sideways a short distance. Still other strata were overturned. Out of all of this came our present great, non-volcanic mountain ranges.

Scientists cannot provide a reasonable explanation of such ranges, but they do try to describe the results. **The term, *"folded* mountains," is frequently used to describe this activity.** This vast pushing together of earth masses was accompanied by terrific pressures on rocks that caused many of them to be crushed.

> "The most conspicuous and perhaps also the most significant structural features of the face of the earth are the great belts of folded mountains, like those of the Himalayas, the Andes, and the Appalachians, the so-called orogenic [mountain-building] *belts.*"—**W.H. Bucher, "Fundamental Properties of Orogenic Belts," in Transactions of the American Geophysical Union, August 1951, p. 514.*

> "A uniquely satisfactory theory of mountain building still eludes us."—**R.H. Dott and *R.L. Batten, Evolution of the Earth (1971), p. 417.*

> "The cause of the deformation of the earth's outer layers and the consequent building of mountains still effectually evades an explanation."—**A.J. Eardley, "The Cause of Mountain Building: An Enigma," in American Scientist, June 1957, p. 189.*

***Folded mountains* is but one of the two major types; the other is *volcanic mountains*.** Both had their origin at about the same time, although volcanic activity on a much-smaller scale has continued since then.

Evolutionists theorize that mountains rise at a uniformitarian, very slow rate of 1 kilometer [.62 mi] each million years. But the theory does not fit the facts. The Cascades in the Pacific Northwest are one of the tallest ranges in America, yet geologists declare them to be the youngest mountain range in North America.

> "If mountains are rising at the rate of 1 kilometer [.62 mi] in 1 million years, why are some mountains so high if they are [classified by geologists as] so young."—*Ariel Roth, "Some Questions about Geochronology," in Origins, Vol. 13, No. 2 (1986), pp. 80-81.*

SUBTERRANEAN STREAMS—There is an interesting historical statement in the book of Genesis regarding the beginning of the

Flood: "*The same day were* ***all the fountains of the great deep broken up****, and* ***the windows of heaven were opened****"* (Genesis 7:11).

Much is involved in that sentence. **Prior to the Flood, massive quantities of water were in the ground**, and the fountains broke up—and geysered out. **Enormous amounts of water were in the water vapor canopy overhead**—and the windows of heaven opened—and it poured down.

It appears that **the greater portion of the water in the Flood—now in the oceans—came out of the earth, not out of the skies.** This upwelling of water in gigantic geysers caused violent upheavals on the surface, but also below it. **The ground became tortured, crunched, folded, as it attempted to adapt to the immense forces unleashed. In addition, continents began to arise and seafloors began to sink.**

(A remarkable insight about water in the ground, as an indication of a recent Flood, is to be found in *"The Earth Hasn't Dried Out Yet,"* in Appendix 5: "*Things to Think About,* in *Effects of the Flood* on our website.)

VOLCANISM—*(*#2/4 When Water and Magma Mix*)* **But there was another fountain that also opened. This was the basins of underground molten magma.** When the water came out of the ground, earth's geologic system itself was reduced to havoc. Material had to shift in order to fill the major gaps produced when the water left. Huge cracks developed—and water from above went downward and made contact with molten magma.

The Flood had begun. The fountains of the great deep had broken up, and water poured out. Soon lava began flowing out also. These volcanoes, in turn, produced several other effects which we will note shortly. **The release of so much water caused immense low and high pressures within the earth itself. Gigantic cracks sent lava closer to the surface. Water pouring down these cracks hit the molten rock; and exploding jets of lava poured out at the earth's surface, producing thousands of volcanoes.**

Krakatoa was a volcanic island in the Sunda Strait, between Java and Sumatra. It had been venting for several days, when a lateral (sideways) crack developed. Seawater poured through that

crack, and then went straight down the main vent hole. That caused the explosion.

Next to the Tambora explosion in 1815, the explosion of Krakatoa in 1883 was the most violent explosion of the past several hundred years. What would it be like to have a dozen Krakatoas going off at the same time!

That one 1883 volcano caused a worldwide drop in temperatures that lasted five years. A similar effect occurred after Tambora's eruption in 1815. New England received six inches of snow in June 1816, and temperatures there went as low as 37 degrees F. [2.8° C.] that August *(National Geographic, December 1943).*

There are literally thousands of extinct volcanoes at Pleistocene and even post-Pleistocene levels around the globe. That means they were active near the end of the Flood and for a time thereafter.

> "During past geological ages, lava flowed much more freely than now; it not only spouted from craters, but also pushed upward from immense cracks in the planet's crust. Earth's most stupendous rock formation, stretching for more than a thousand miles [1609 km] along the shores of Canada and Alaska, was squeezed out in such fashion. Oozing lava built great plateaus which now cover 200,000 square miles [517,980 km^2] in Washington, Oregon, Idaho and northern California. An even larger eruption created India's famous Deccan plateau, whose once molten rock extends as much as 2 miles [3.2186 km] below the surface. Argentina, South Africa and Brazil have similar plateaus."—**Ga1y Webster, "Volcanoes: Nature's Blast Furnaces," in Science Digest, November 1957, p. 5.*

> "The presence of enormous masses of igneous [volcanic] rock all over the world is another problem for uniformitarianism. Often they are found intruding into previously deposited sedimentary rocks or on the surface covering vast areas of earlier deposits. The Columbia Plateau, of the northwestern United States, is a tremendous lava plateau of almost incredible thickness covering about 200,000 square miles [517,980 km^2] . . Nothing ever seen by man in the present era can compare with whatever the phenomena were which caused the formation of these tremendous structures. The principle of uniformity breaks down completely at this important point of geologic interpretation. Some manifestation of catastrophic action such as the breaking up of the fountains of the great deep during the Flood is sufficient."—*John C. Whitcomb, The World that Perished (1988), pp. 84, 86.*

It is clear that **old lava flows are found not only on the ground but below it, yet in no instance are lava beds from ancient volcanoes ever found below the Cambrian level. *The beginning of the Cambrian marks the beginning of the Flood*.** Thus volcanic action took place throughout the Flood, and afterward as well,—but not before.

Volcanic action not only occurred for a time after the Flood, but also during the Flood and as it was receding. We know this because of *pillow lavas.* This is a special rounded pillow-like shape that lava will form when ejected from an underwater volcano. Such lava is found in great abundance all over the world, including Canada:

> "Pillow lavas . . are common in many parts of the Canadian Shield."—**W.G.Q. Johnston, "Pillow Lava and Pahoehoe: A Discussion," in Journal of Geology, 77:730 (1969).*

> "Pillow lavas, produced as fluid lava cools underwater, is the most abundant volcanic rock on earth."—**J.G. Moore, "Mechanism for Formation of Pillow Lava," in American Scientist, 63:269 (1975).*

MAGNETIC CHANGES—Magnetic changes in earth's core, caused by structural corrections occurring within the earth, repeatedly took place at this time. These were caused by displaced earth, water, and volcanic explosions. This topic is dealt with in chapter 20, *Paleomagnetic Dating.*

VOLCANIC POLLUTANTS—For the most part, **air-borne pollutants do not stay aloft in the atmosphere very long.** Particles of soot or dust in the troposphere (reaching to the top of the clouds, or to 12 miles [19.3 km] up) generally settle or wash out, in rain or snow, within a few weeks. Gases are absorbed by moisture within four months.

But when pollutants are shot up into the stratosphere (between 10 and 30 miles [16-48 km] up), they may remain there for years. Volcanoes are one of the only natural causes of this. Large amounts of dust particles were hurled into the stratosphere by thousands of volcanoes.

> "Perhaps the heaviest polluters of the stratosphere are volcanic eruptions: Lofting an ash cloud laden with sulfur dioxide perhaps 12 miles [19 km], a major eruption can shroud an entire hemisphere

in a veil of particles that reduces sunshine and lowers ground temperatures.

"Once aloft, high-altitude pollutants are assured a long stay. Unruffled by the weather and vertical air mixing of the troposphere, the stratosphere is cleansed by only one circulation pattern. While strong east-west winds blow the air of the stratosphere around the globe, a languid horizontal drift gradually carries pollution toward the Poles. High-altitude winds in the middle latitudes draw some air from the stratosphere downward into the troposphere, and the rest eventually sinks in the frigid polar areas, at last returning its freight of pollutants to earth."—**Oliver E. Allen, The Atmosphere (1983), p. 142.*

RAPID COOLING—There are over 10,000 extinct volcanoes in the world today. This includes the seamounts under the ocean. They had their origin in the catastrophic conditions below the surface of the earth at the time of the Flood. **Thousands of volcanoes poured forth so much smoke that they darkened the sky. The result was a rapid cooling of the earth.**

When Krakatoa blew its top in 1883, the explosion was heard for thousands of miles. Over a square mile [2.5899 km^2] of dirt was blown into the skies. According to H. Wexler of the U.S. Weather Bureau, it took three years before the Krakatoa dust settled to earth again. He also tells us that **as much as 20 percent of the solar radiation may be reduced after *just one* severe volcanic eruption.**

The Krakatoa dust caused a definite lowering of worldwide temperatures for about two years. Enough dust had settled by then, that temperatures rather quickly began to return to normal. Yet Krakatoa was only one volcano. **At the close of the Flood, when several thousand volcanoes were erupting at the same time, climatic conditions dramatically and quickly changed throughout the world.** When they subsided, the climate could again warm up.

A similar explosion occurred in the East Indies in 1815:

"On 7 April 1815, Mount Tambora, on a small island east of Java, exploded. Thirty-six cubic miles [150 km^3] of rock and dust were hurled into the upper atmosphere. For that reason, sunlight was reflected to a greater extent than usual, and temperatures on Earth were lower than usual for a year or so. In New England, for instance, 1816 was unusually cold, and there were freezing spells

in every month of that year, even July and August. It was called the year without a summer."—**Isaac Asimov, Asimov's New Guide to Science (1984), p. 169.*

An increase of carbon dioxide, from volcanic emissions of ash, would raise the temperature but little. Even an eightfold increase in CO^2 would raise the mean temperature by only about 2° F. But **the dust factor (aerosols) would decrease the temperature significantly and more effectively. Scientists tell us that volcanic action, sustained over several years, could trigger an ice age.**

"An increase by a factor of 4 in the equilibrium dust concentration in the global atmosphere . . could decrease the mean surface temperature by as much as 3.52K. If sustained over a period of several years, such a temperature decrease could be sufficient to trigger an ice age."—**S.I. Rasool and *S.H. Schneider, "Atmospheric Carbon Dioxide and Aerosols: Effects of Large increases on Global Climate," in Science, 173 (3992):138-141 (1971).*

Rapid cooling, induced by hundreds and thousands of volcanic explosions just after the Flood, brought on the ice age.

FREEZING OF POLES—*(*#3/2 Killed, Frozen, and Buried*)*
Water changes temperature more slowly than does soil or rock. Polar seas helped slow the freezing of the poles; but, **when the freezing of polar waters finally occurred, they locked in the cold all the more solidly.**

At some point, the following scenario probably took place:

Amid the eruptions, explosions, and pollution of 10,000 volcanoes, the poles froze and the animals, in the far north, were overwhelmed by the cold. One of these was the mammoth, a type of gigantic elephant.

"The extinction of the wooly mammoth in northern Eurasia should be mentioned. In Siberia alone some 50,000 mammoth tusks have been collected and sold to the ivory trade, and there are rare occurrences of whole animals preserved in frozen ground."—**R.F. Flint, Glacial and Pleistocene Geology (1957), p. 470.*

Not only mammoths but a number of other animals were rapidly frozen. Here is one scientist's listing of the different species which were **quickly frozen**:

"The extensive silty alluvium, now frozen, in central Alaska contains numerous mammal fauna . . Freezing has preserved the skin and tissue of some of the mammals. The faunal list includes two [types of] bears, dire wolf, wolf, fox, badger, wolverine, saber-tooth

cat, jaguar, lynx, wooly mammoth, mastodon, two horses, camel, saiga antelope, four bisons, caribou, moose, stag-moose, elk, two sheep, musk-ox and yak types, ground sloth, and several rodents."—*Op. cit., 471.*

One field zoologist, *Sanderson, tried to visualize the possible circumstances that could have caused such quick-frozen specimens as he had seen in the far north. **The animal remains appeared to have undergone both the effects of violent storm conditions and rapid freezing.**

"In Alaska . . the mammals and other animals, with one or two significant exceptions, were all literally torn to pieces while still fresh. Young and old alike were cast about, mangled and then frozen. There are also, however, other areas where the animals are mangled, but had time to decompose before being frozen . . Beyond these again, there are similar vast masses of animals, including whole families or herds, all piled together into gulleys and riverbeds and other holes, but where only bones remained."—**Ivan T. Sanderson, "The Riddle of the Frozen Giants," in Saturday Evening Post, January 16, 1960, p. 83.*

Violent winds would help explain why we find large quantities of remains clumped together, either frozen in hollows in northern ground or as fossils contained within pockets in sedimentary strata farther south. **The lack of sunlight from volcanic dust overhead would bring on both the intense cold in northern latitudes, as well as violent storms that would reach down into warmer areas in the south.**

What could cause all this? *Sanderson, a non-believer in the Genesis account, decided **the storms and sudden freezing was caused by gases and smoke shooting skyward from large numbers of volcanoes!** Here is his vivid description!

"A sudden mass extrusion of dusts and gases would cause the formation of monstrous amounts of rain and snow, and it might even be so heavy as to cut out sunlight altogether for days, weeks, months or even years if the crustal movements continued. Winds beyond anything known today would be whipped up, and cold fronts of vast lengths would build up with violent extremes of temperature on either side. There would be forty days and nights of snow in one place, continent-wide floods in another, and roaring hurricanes, seaquakes and earthquakes bringing on landslides and tidal waves in others."—**Ibid.*

The freezing of the poles had two major effects. (1) Vast quantities of water were locked into ice in the polar regions,

and (2) Sheets of ice slid southward partway down the continents. Popularly known as **the "ice age,"** this is scientifically known as **the *period of glaciation***. It was not until the Flood receded that the ice sheets could begin their inexorable march southward. The ice sheets made the air above them extremely cold.

> "Because incident solar radiation is mostly reflected from a snow surface, the air above an extensive snow cover is colder, and atmospheric pressure decreases more with altitude in the colder air. This tends to create an upper 'cold trough' above an extensive snow cover."—**L.D. Williams, "Effect of Insulation Changes on Late Summer Snow Cover in Northern Canada," in Proceedings of the WMO/IAMAP Symposium on Long-Term Climatic Fluctuations (1979), p. 444.*

Evolutionists declare that it requires many thousands of years for ice caps to form, and that their very existence is an evidence of long ages. During World War II, a squadron of eight P-38 Lightning fighter planes left a U.S. Army air base in Greenland, headed for Britain. But a blizzard forced them to turn back. Although they crash-landed, all the pilots were rescued. In 1988, the U.S. Army decided to salvage those aircraft. But, instead of dusting off a little snow from them, as they expected, the airplanes were found to be buried under 250 feet [76.2 m] of ice! *(*Life, December 1992).*

RESIDUAL CATASTROPHISM—*This is the name given to effects which occurred during a short period of time just after the Flood was finished.* *Most of what we see about us today is a result of that time span. Let us now consider some of these effects:*

GLACIATION—There is abundant evidence that northern Asia, all of Canada, and about a fourth of the United States was once covered by glacial ice.

These massive ice sheets were caused by two factors: (1) **The darkening of the skies by volcanic dust**, and (2) **the loss of earth's thermal blanket**. This was the water vapor canopy in the atmosphere that formerly gave our planet a continual "greenhouse" effect.

The falling of snow stored enormous amounts of water in the form of ice. Today the remnants of it are found primarily in Greenland and Antarctica, but also in northern Canada and northern Asia. If this stored water was suddenly released, all the great

THE GLACIAL PERIOD—Massive ice sheets formed and moved southward, as a result of immense volcanic activity.

THE GLACIAL PERIOD

Shown below is a chart of the maximum southward coverage of the glacial age in North America. Intense volcanic activity, following the Flood, produced a worldwide climatic cooling, and ice began accumulating and flowing outward from the poles.

Scientists are able to identify its direction of flow and ultimate extent from various evidences. Glacial scouring and lateral moraine reveal its passage; terminal moraine—dumps of dirt and gravel at its foot—show its southernmost extent. Studying accumulation zones, ablation zones, and feet of mountain glaciers today helps scientists better understand the mechanics of the glacial activity that, several thousand years ago, overspread the northern reaches of North America.

seaports of the world would be covered by the seas.

Research scientists have discovered that **hardly any snow falls in the Antarctic.** From the standpoint of rain and snow, it is "the driest continent on the planet." Yet the ice in Greenland is over a mile [1.6 km] deep, and in Antarctica it is as much as five miles [8 km]. Originally these great polar ice caps must have been much larger. **When did all that snow fall on the Antarctic continent?**

During the ice age, so much snow was falling that glaciers were formed which flowed outward toward the equator:

> "Geologists and climatologists have tried for more than a century to explain the recurrence of glaciation on a continental scale. Theory after theory has been suggested, but all explain too little or too much. None can be considered satisfactory, at least in its present form."—*J. Gilluly, *A.C. Waters, and *A.O. Woodford, Principles of Geology (1952), p. 319.*

The Canadian ice sheet, growing from the northeast, left much of Alaska and the Pacific slope unglaciated but **extended southward until the rim of the ice stretched over much of the northern United States.** At its maximum southern extension, the boundary of the ice stretched from Seattle, Washington, over to Bismark, North Dakota, and then veered southeastward, following close to the line of the modern Missouri River, past Omaha and St. Louis, then eastward past Cincinnati, Philadelphia, and New York, stopping at the southern edge of Long Island.

When the ice sheets were at their farthest extent, they covered over 17 million square miles [44 km^2] of land in both polar regions **or some 30 percent of Earth's present land surface.** This is three times as much land as is covered by ice today.

These glaciers scoured, scored, and polished solid granite. In other places they left dumps of sediments along their sides *(lateral moraine)* and also where they finally stopped *(terminal moraine).* The glaciers really left their mark on our planet!

One example of the impact of these glaciers is to be found in the Canadian Shield and the Great Lakes in America. The ice as it moved southward scoured thousands of square miles of bare granite in Canada and cut out the Great Lakes. These lakes were originally much larger than today.

There is still much water locked up in ice in the far north and south. The earth's load of ice, amounting to nearly 9 million

cubic miles [37 million km^3], covers about 10 percent of its land area. About 86 percent of the ice is piled up in the Antarctic continental glacier and 10 percent in the Greenland glacier. The remaining 4 percent is located in Iceland, Alaska, the Himalayas, the Alps, and a few other locations. **If the 23 million cubic kilometers [14 cu mi] of ice in the world melted at the same time**, the volume of the oceans would increase 1.7 percent. That would be enough for **the sea level to rise about 180 feet** [549 dm]. The Empire State Building would be in water to nearly the 20th floor. **Scientists estimate that the amount of water locked up in the oceans at the height of the ice age lowered sea level by about 400 feet** [1,219 dm]. This could be one of the reasons why the filling of the ocean basins seemed to pause for a time.

It is estimated that a drop in the earth's average annual temperature of only 3.50 C. is sufficient to make glaciers grow; whereas a rise of the same amount would melt Antarctica and Greenland to bare rock in a matter of centuries.

(At the present time, an increase of world carbon dioxide, primarily from burning of fossil fuels, threatens us with a *"greenhouse effect"* and a melting of the glaciers; whereas the opposite trend toward pollution of the atmosphere, by dust and smog, throws particles into the air that screen sunlight from the earth, resulting in a *cooling effect.* Experts are generally agreed that the warming trend may, at present, be the more powerful of the two.)

The total coverage of glaciers was unbelievably vast.

> "Some 4,000,000 square miles [10 million km^2] of North America, 2,000,000 square miles [5 million km^2] or more of Europe, and as yet little known but possibly comparable area in Siberia were glaciated. In addition, many lesser areas were covered by local ice caps. Thousands of valley glaciers existed in mountains where today there are either no glaciers or only small ones."—**W.D. Thornbury, Principles of Geomorphology (1954), p. 354.*

Yet geologists have no adequate explanation for what caused this glacial activity.

> "The underlying cause of glaciation remains in doubt . . At least 29 'explanations' have been advanced to account for widespread glaciations. Most of these had little chance of survival from the first, but others enjoyed some degree of success until they were rendered untenable by subsequently accumulated information."—

**William L. Stokes, "Another Look at the Ice Age," in Science, October 28, 1985, p. 815.*

INCREASED TROPICAL RAINFALL—It is well-known that **there was much more rainfall in the lower latitudes for a time after the Flood. This occurred simultaneous with the glacial flows in the northern latitudes.** Even areas which later become deserts, such as the Sahara, had an abundance of rain. Lakes and continental lowland basins had much higher water levels. All the rivers of the world for a time carried a far greater volume of water.

SUDDEN WARMING—Just as surely as there was a sudden freezing, so there was a rather sudden warming afterward. That fact summarizes certain geologic evidence.

Recall again to mind the explosion of Krakatoa in 1883. ONE major volcanic explosion was enough to darken the skies for thousands of square miles, send dust around the world that remained for two years, and cool the planet for over a year. But then everything warmed up rather quickly after that.

Next we consider the ten thousands of now extinct volcanoes that, at some earlier time, blew up and poured forth lava, bombs, and dust all at about the same time. The result was not a two-year cooling, but an ice age that lasted for an indeterminate length of time. **When the volcanoes subsided, the dust settled, and much of the planet warmed up again. This brought a rather rapid receding of the glacial sheets.**

"The data indicate a rather sudden change from more or less stable glacial conditions to postglacial conditions."—**D.B. Ericson, et al., "Late-Pleistocene Climates and Deep-Sea Sediments," in Science, August 31, 1956, p. 388.*

Evidence for a rapid warming up has been obtained from examination of deep-sea sediments, river delta silting, shoreline indications, and pluvial lake desiccation (drying up). Rapid changes in each of these reveals a rather quick climatic warming.

Sudden warming would quickly increase melting of ice, draining of glacial lakes, and water runoff through the rivers, onto the deltas, and into the oceans.

"The level of the Great Basin lakes fell from the highest terraces to a position close to that observed at present. The silt and clay load of the Mississippi River was suddenly retained in the alluvial val-

> ley and delta. A rapid ice retreat opened the northern drainage systems of the Great Lakes and terrestrial temperatures rose to nearly interglacial levels in Europe. In each case the transition is the most obvious feature of the entire record."—**Wallace Broeker, et al., "Evidence for an Abrupt Change in Climate Close to 11,000 Years Ago," in American Journal of Science, June 1960, p. 441.*

(The "11,000 year" number, given in the above article title, comes from radiocarbon dating; but as we learn in chapter 6, *Inaccurate Dating Methods,* the actual date would be much less.)

It is radiation from the sun that warms the earth. A greenhouse effect exists that helps to hold in that heat. This is caused by water vapor, carbon dioxide, and ozone in the atmosphere. The Flood removed much of the *water vapor* and locked large amounts of *carbon* into fossils, coal, and oil. **With the greenhouse effect greatly weakened, and the sunlight blocked by volcanic dust, the glacial sheets moved southward. But the volcanoes added more carbon to the air** and it remained after the dust settled. Sunlight could again penetrate and water vapor was slightly restored. **So a warming up occurred.**

> "We are now sending about 5.5 billion tons [4.1 billion mt] of carbon dioxide into the atmosphere each year; only half that much can be absorbed by oceans and forests. Some scientists predict that if the current level of fossil fuel use continues, by [A.D.] 2030 there could be a 3-to-9 degree rise in world temperatures. Such change should melt polar ice, raise ocean levels and seriously disrupt agriculture and ecosystems."—**R. Milner, Encyclopedia of Evolution (1990), p. 202.*

It is of interest that so much evidence is being found that points to a worldwide change in temperature and climate, that a new theory has been developed to explain it. Calling it *turnover pulse hypothesis,* *Elisabeth Vrba of Yale says that there were many climatic changes, and each one killed off some species and, in some unknown way, magically triggered the sudden evolving of new ones. She has gathered **data from all over the world, indicating that at least one massive climatic change occurred at some time in the past.**

A FLOOD MODEL—*(*#4/5 Petrified Wood / #5/22 Things to Think about*)* You will notice that in describing the effects of the Flood **we have viewed many pieces of a puzzle. Let us for a moment seek to put them together. *The following suggested***

pattern would be what scientists would call a "Flood and post-Flood model":

Before *the Flood*, the climate was warm from pole to pole, and was caused by the vapor canopy and certain other factors. No high mountains existed, and there were only broad rivers and small seas. Dinosaurs were alive, but the largest of them were plant eaters and the fiercest may have occupied themselves with attacking the vegetarian ones (just as the gigantic sperm whale only attacks the giant squid, while ignoring the other ocean creatures). Yet, either way, because of man's sin "the earth was filled with violence" (Genesis 6:13)—probably both by man and beast, and between them.

***The Flood* began all at once**, as the rain fell and reservoirs of water beneath the surface burst forth. Enormous cavities had formed in the ground, where the water had collapsed inward. The geologic balance was upset and gigantic cracks opened, letting water pour back downward into pools of hot magma farther below.

At the same time, the ocean basins began lowering and/or continents rising to some extent. More lowering and rising would occur later. Water would have been the calmest in the far north and south, and ocean currents would have been the slowest there.

> "Superimposed on all the general turmoil of the Flood would be the effect of the moon's gravitational pull on the worldwide ocean. At the present time the moon pulls up a "bulge" of water and, as the earth rotates beneath it, this bulge is seen as the tide coming in; however, the waters today never go beyond their prescribed limits.
>
> "In the Genesis Flood, the bulge remained and was not dissipated at the shorelines so that the earth, continuing to spin beneath it, would cause a buildup of tremendous currents. The velocity of the water traveling over the submerged earth could have been hundreds of miles per hour directly beneath the bulge but taper off to nearly zero towards the poles of the earth's axis.
>
> "The process would produce great quantities of sediment and lead to a complex but, nevertheless, organized imposition of forces upon the deposition rates of sediment and suspended matter."—*Ian T. Taylor, In the Minds of Men (1987), p. 111.*

Terrific storms occurred, and the water level continued to rise. Rapidly flowing water, massive wave action, rapid sedimentary coverage, water deposition and suction action, gigantic mats of vegetation, volcanic fire and lava, seismic ("tidal") waves—all worked together to wreck

havoc.

Marine animals were washed up by the roiling waters and covered by ***"Cambrian"*** sediments. More marine animals were covered by ***"early Paleozoic"*** gravel, sand, and clay.

The slowest land animals and some fish were buried in ***"Silurian"*** dirt. By now the waters were higher and began covering the seed plants with ***"Devonian"*** soils.

Soon, the rising waters reached the conifers and buried them beneath ***"Permian"*** deposits. The slowest of the lumbering dinosaurs were overtaken next, and were covered by ***"Triassic"*** soils.

By now the storms had become so violent that animals were thrown together into pockets and *"fossil graveyards"* became common.

Eventually, the ***"Jurassic"*** and ***"Cretaceous"*** sediments had buried the last of the dinosaurs, and the fleeter mammals were being overtaken and buried by ***"Tertiary"*** earth. Then the last of them were entombed underneath ***"Quaternary"*** sediments.

Almost no humans were buried, almost no apes, and relatively few birds. Why? Because they knew how to keep going on to the very end, apes and man could climb to the very highest points and cling to trees and rocks. And when the end came, there were no more burials, only sinking through seas to the ocean floor beneath, where they would decay away or be eaten by fish still alive in the ocean.

As the waters advanced, **earth movements increased; and these, along with the violence of storms and volcanic action—resulted in *"discontinuities";*—**locations where an arrangement of vertically stacked strata would end, while horizontally next to it a differently arranged strata pattern would begin.

Soon there was a *worldwide sea*; for the waters had covered the highest mountains, which never had been high to begin with (Genesis 7:20).

Gigantic *mountain building* now began in earnest. The lowest basins had been first to fill with water and, under its weight, began to settle. So much water had been taken out of the ground that it was structurally looser. Water flowing down volcanic cracks caused massive explosions. As the waters covered most of the earlier volcanoes in the oceans (now called *seamounts),* seawater would flow down vent holes—and cause terrific explosions, which would blow off the tops of the seamounts.

As the Flood receded, under the impact of all that was taking place, the great ocean basins lowered and the continents rose higher—all part of a balancing act that scientists call *geostasy.* Once or twice there was a pause that caused our present continental shelves. This occurred either while the oceans were initially filling or later, as these mammoth earth movements were taking place.

Sinking pressures, rising pressures, and lateral pressures—resulted in gigantic folding; and huge mountain chains were lifted up. The Appalachians probably arose earlier, for today they show evidence of having been rounded by Flood waters. Many other ranges were pushed up. One of the last ranges to arise was the northern Cascade Mountains in Washington State, for they show little evidence of Flood erosion.

As more and more dry land appeared, volcanic ranges also arose. Belts of volcanoes encircle the Pacific Ocean, run through the Mediterranean, and elsewhere.

The glacier sheets advanced outward from the polar regions. These probably covered much of Europe, Asia, and North America for several centuries before receding. But even after they did, few civilizations were able to enter those colder areas until they warmed up sufficiently. This did not occur until just before the time of Christ.

While the northern latitudes were wrapped in colder weather, Egypt, the Near East, and India had ideal weather. It was probably similar to Southern California, although with much better rainfall.

The gradual warming of the planet resulted in several major effects that began just after the time of Christ: (1) The Near East, where civilization had once been centered, slowly became a hot, desolate wasteland. (2) Warming up, northern Europe gradually filled with racial groups which then invaded and conquered the Roman Empire. (3) Europe became the center of civilization in the West. (4) The Near East became a dry, nearly treeless desert.

CONCLUSION—*(*#6/38 Additional Evidences of the Flood / #7 The Water Explosion*)* A number of variant Flood models could have been presented which probably would have summarized the data just as well. But they would not be much different from this one.

The facts, taken as a whole, point to a worldwide Flood, and not to long ages of sedimentary strata production and transitional species evolution.

The Flood was so universal and cataclysmic in its cause, scope, and results that it has had lasting effects on the earth, the sky, and all life forms from that day to this. **It is impossible to discuss creation and evolution without giving close attention to the Flood and its powerful effects.**

EVOLUTION COULD NOT DO THIS

Daniel Bernoullie was an 18th-century physicist who first stated the principle that the pressure exerted by a moving fluid decreases as the fluid moves faster. Bernoullie's principle may sound complicated to you and me; but prairie dogs, which live in the western plains of America, understand it well. These little creatures admirably apply this principle in making their underground tunnel cities.

The burrows have two openings—one at ground level, the other located on a foot-tall chimney of mud and stones. They work hard to make that second opening higher than the flat one on ground level. Having done this, the Bernoullie principle takes effect and nicely aerates their burrows with fresh air.

Okay, so you still don't understand Bernoullie's principle. That's all right; the prairie dogs do.

EVOLUTION COULD NOT DO THIS

Spiders go higher in the sky than any other living creature on our planet. Here is how it is done: When the baby spider is hatched, he just crawls up to a high point. It may be a grass stem or the side of a tree trunk, or a leaf on a plant. Then he upends—and off he goes! Even though only a day old, he knows exactly what to do. Instead of a tail, the spider has a spinneret. Lifting it up in the air, he begins spinning his fine thread which catches in the wind and carries it away as the baby keeps reeling it out. Soon enough thread (about 9 feet [27 dm]) is in the air, and the baby is lifted off its feet and goes sailing! This thread is actually a liquid which immediately hardens when the air touches it. For its size, the thread is stronger than steel, and can stretch without breaking. Where did the baby learn this? not from his mother. As soon as he becomes airborne, the little fellow climbs up on the silk line and walks on that fluttering thing as it is flying high! How he can do this and not fall off is a mystery. But he quickly becomes master of the airship. Arriving about halfway along the line, he pulls on it, tugs it here and there, and reels it underneath him. In this way, the line now becomes a rudder which he uses to steer up or down! Where did a one-day old, with a brain one-thousandth as large as a pin-head, get such excellent flying instruction? Soon he lands on something, but generally only long enough to prepare for another flight, and off he goes again. Scientists in airplanes have found baby spiders 16,000 feet [4876 m] up in the air! That is 3 miles [4.8 km] high! Eventually the tiny creature will land. It may be several miles down the road, in a neighboring state, or on an island far out at sea. Spiders are the first creatures to inhabit new volcanic islands.

EVOLUTION COULD NOT DO THIS

The trilobite is abundant in the very lowest fossil levels; but, according to *Levi Setti, its eye is said to have "possessed the most sophisticated eye lenses ever produced by nature," which required "knowledge of Fermat's principle, Abbe's sine law, Snell's law of refraction and the optics of birefringent crystal." He concludes: "The lenses look like they were designed by a physicist."

Because crayfish and lobsters live their lifes moving backward, they have an unusual internal plumbing system. The kidney is located in front of the mouth, so the gill circulation can carry the wastes away from the body. If the kidney outlet was near the back end as in most creatures, the wastes would be carried to the gills. This perfect design enables crayfish and lobsters to live efficiently, whether very slowly crawling forward or rapidly swimming backward.

One bacterium has small hairs twisted in a stiff spiral at one end of the creature. Upon closer microscopic examination, scientists were totally amazed to discover that this bacterium has a rotary engine! It spins this corkscrew like the propeller of a ship, driving itself forward through water. It can even reverse the engine! Researchers still do not understand how it is able to whirl the mechanism. Using this method of locomotion, it is able to attain speeds which would, if it were our size, propel it forward at 30 miles [48 km] per hour. Commenting on this, *Leo Janos in *Smithsonian* said that "nature invented the wheel." Another researcher, *Helmut Tributsch, declared: "One of the most fantastic concepts in biology has come true: Nature has indeed produced a rotary engine, complete with coupling, rotating axle, bearings, and rotating power transmission."

CHAPTER 14 - STUDY AND REVIEW QUESTIONS
EFFECTS OF THE FLOOD

GRADES 5 TO 12 ON A GRADUATED SCALE

1 - Discuss and contrast the theory of uniformitarianism with the fact of catastrophism.

2 - Select one of the following topics and write a report on how it points to a former worldwide Flood: (1) the existence of sedimentary strata and fossils; (2) why smaller, slower fossils are found lower in the strata and larger, faster ones are found at higher levels; (3) the fact that fossil deposits were laid down so rapidly; (4) the fact that, beginning with the lowest fossil strata, the Cambrian, there is such a vast amount of fossils, yet below it there is next to nothing; (5) the existence of polystrate trees; (6) coal and oil deposits; (7) the origin of graded bedding; (8) unity of the strata; (9) strata sequence and overthrusts.

3 - There are several evidences of what conditions were like before the Flood. In a brief paragraph or two, discuss one of the following: (1) pre-Flood climate; (2) pre-Flood atmosphere; (3) pre-Flood oceans.

4 - The Flood affected the entire world, and it was mentioned in later records. Select one of the following topics and write a half-page article on it: (1) Flood stories; (2) Noah's name in world languages; (3) the Flood in Chinese; (4) the size of Noah's Ark in the Biblical record; (5) Flood chronology in the Biblical record.

5 - The Flood exerted the most powerful effects on our planet of any event since the six-day Creation. Select one of the following topics and write one or several paragraphs explaining how one of these effects points us to the Flood: (1) continental shelves; (2) seamount corals; (3) submarine canyons; (4) existence of the oceans; (5) higher lakes; (6) larger rivers; (7) immense erosion and sedimentation; (8) sedimentary strata; (9) varve dating; (10) dinosaurs; (11) mountain building; (12) subterranean streams; (13) volcanism; (14) volcanic pollutants; (15) glaciation; (16) increased tropical rainfall for a time afterward; (17) sudden warming.

6 - Write your own Flood model, indicating the possible sequence of events during and after the Flood.