

Outline edition *Includes Part III*

CAN CREATION DOCTRINE AGREE WITH MODERN GEOLOGY?

by D. E. Wonderly, October 7, 1988

(Introduction, Outline, and Summary)

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I. INTRODUCTION

It is my personal conviction that we should maintain at least the following beliefs which are related to the truth of creation:

1. Genesis 1-3 is an accurate, divinely inspired, brief historical account of the order and events of God's creation of the universe. It is not to be allegorized or relegated to the category of merely figurative language.
2. Man was created by God, without animal ancestry, in very recent times.
3. God created natural laws by which the universe is maintained, and these laws have remained stable since the time of their creation. It is neither good theology nor good science to say that God has changed them.
4. This world is rational and to a great extent understandable to man who was created "in the image and likeness of God," and still retains some of that likeness. God invites us to investigate and understand his created world and, to some extent, other parts of the universe.
5. Since God is a God of truth, there can be no contradiction between his special revelation and his general (natural) revelation, and no contradictions within either form of revelation--i. e., one part of the Bible doesn't contradict other parts, and one aspect of the earth's crust doesn't contradict what we see in other parts.

II. A BRIEF COMPARISON OF THE PRESENT STATUS OF CREATION DOCTRINE OF THE U. S. AND CANADA WITH ITS STATUS IN ENGLAND A CENTURY AGO (The documentation for this section is available from the original manuscript being used by the author in this lecture.)

1. In the 1980's we have experienced an avalanche of condemnation of all creationists, and of the Bible as the supposed source of every idea taught by creationists. Ever since the Arkansas creation trial most critics of creationism have built largely upon the unscientific assertions that the earth is only a few thousand years old, and upon young-earth creationists' claims that this belief is taught in the Bible. Condemnation of geologic, oceanographic, and astronomic research by prominent creationists has led most non-Christian educators to oppose all Biblical elements in the school curricula.
2. One of the many examples of the opposition to creation and the Bible, based on objections to the young-earth doctrine of extreme creationists, is the large booklet Science and Creationism, published by the National Academy of Sciences in Washington in 1984, and now widely distributed throughout the U. S., among educators and other public leaders.
3. The problem of extreme creationists' open denunciation of practically all of scientific research actually became prominent in the middle of the 19th century, about 2 decades before Darwin published his book The Origin of Species in 1859.

Many Christians were failing to recognize the distinction between the actual scientific data which was being collected by honest scientists--many of whom were Bible-believing Christians--and the opinions and theories of unbelieving scientists.

Fortunately a large number of Christian leaders, including the geologist Hugh Miller (who was also active in Christian work), saw the need for distinguishing between the real data of scientific research and the opinions and theories. These men wrote and preached extensively to help the people understand the issues and to stop condemning true science.

4. By about the end of the century, most evangelical leaders and Bible teachers recognized the validity of true scientific research--as can be noted in several of the large Bible commentaries from the latter half of the 19th century, which are still used extensively by conservative Christians today. Some of these Christian leaders did adopt a theistic evolution position, but many insisted that we must respect the text of Genesis 1-3 and realize that the Holy Spirit was very careful not to allow Moses, the human author, to state any specific limit as to how long ago the earth and living things were created. They also accepted the creation of the human race as very recent and without animal ancestry--as old-earth creationists of today do.

This literal view of creation, and rejection of theistic evolution, continued to be strong among conservative Christians during the first 65 years of this century, and was taught in many of the conservative seminaries, Bible institutes, and Bible colleges of that period.

5. During the 1960's Morris & Whitcomb and their colleagues began a strong effort to change the creation teaching in the conservative seminaries, Bible institutes, and Bible colleges back to a condemnation of practically all geologic, oceanographic, and astronomic research which indicates that the earth and universe are old. They simultaneously insisted, and still insist, that the Bible actually specifies that the earth and universe are no more than 10 or 12 thousand years old. The Seventh-Day Adventists, led by George M. Price, had been strongly opposing the geologic evidence for great age, all during the early decades of this century. Henry Morris based a large part of his teaching of "Flood geology" on the published works of G. M. Price, even though Price had never had any formal training or field experience in geology. Neither Morris nor Whitcomb had a working knowledge of any type of geology which could help them understand and evaluate the age-indicating characteristics of the sedimentary rock strata. In fact, their earlier writings show that they were unaware of the existence of the branch of geology known as sedimentology. Even their recent books and articles, along with those of their colleagues, show no indication of their having studied sedimentology or the data obtained by petroleum-geology research. This is most unfortunate, because one of the primary claims of "Flood geology" teaching is that God has left evidences of the Flood in the sedimentary rock strata. Yet neither "Flood geologists" nor anyone else can determine how the sedimentary rock layers of the earth were laid down, without knowing (1) the microscopic characteristics of the many different kinds of rocks, (2) the ways by which those rocks can and cannot be formed, and (3) the many characteristics of the rock layers which show the kinds of environments which were responsible for depositing and lithifying them. (These are 3 of the most fundamental topics dealt with in the discipline of sedimentology.)
6. We recognize the truth of the Biblical account of the Flood. Evidently the Flood was a major cataclysm which affected every continent of the earth, but most of the sedimentary strata on the continents are of types which could not have been formed rapidly by the Flood. However, near the edges of the continents there are numerous deposits of poorly lithified rock and unlithified sediments which may have been laid down by the Flood.

III. SOME SEDIMENTARY EVIDENCES FOR LONG PERIODS OF TIME ON THE EARTH

There are many kinds of evidences for long periods of time found in the sedimentary rock layers of the earth. Some of the main important types of such evidence are listed below. In presenting this list we abide by the basic beliefs listed at the beginning of this lecture, and also we assume that God allowed the natural laws and processes which He had created, to form the sedimentary layers of the earth. That is, like Morris & Whitcomb, we reject ideas which state that God performed supernatural miracles to create ready-made fossils or to suddenly create rock layers which ordinarily are formed by natural depositional processes.

1. Great, thick deposits of rocks which are composed of fine-grain sediments that can settle out of water only at slow rates. These are the shales and the fine-grain limestones such as chalks and micrites.
2. Layered deposits of evaporite minerals (salts) hundreds of feet thick, which are found over broad areas in many of the oil fields, at various depths. These are usually present at several levels (depths) in the oil field areas and have strata of limestone and other kinds of rock between them. The evaporite layers had to be deposited by concentrated sea water, but the limestone layers had to have normal or near normal seawater (or even fresh water) as the depositional medium.
3. The immense amount of sedimentary rock lithification which has occurred in the past, and the necessarily-slow rate at which it occurs. Sedimentary lithification is not related to the hardening of molten lava or the baking of bricks. It is mainly a process of the slow building in of microscopic-size mineral crystals between the sediment grains by the action of percolating water. Physical conditions and the type of water flowing through the sediment mass have to be very favorable for this process to begin and to continue. Nevertheless, in many large areas of limestone, more than 2% of the weight of the limestone layers consists of the cementing, mineral crystals which have been built in, and some limestone consists of 50% or more, by weight, of these crystals. (This information and many of the other items of information in this list can readily be found in the manuals and research reports of petroleum geology.)
4. Large, biologically-formed, in situ structures found buried deeply in the oil fields of the world and covered by evaporites and other types of rock layers which could not have been formed rapidly (because of the nature of those layers). These growth structures include true coral reefs--including perfectly-formed atolls--in some of the oil fields.
5. Areas of the world where immense amounts of erosion of hard, igneous rock have occurred, by the action of running water and wind.
6. Caves and other large solution cavities which have been dissolved out of thick limestone deposits by the slow percolating of fresh water. For example, the size and characteristics of some of the large chambers in the Carlsbad Caverns of New Mexico defy all attempts of explanation in terms of "Flood geology." (We must remember that mere hypotheses must never be accepted in place of data or evidence.)
7. The existence of several large series of vertically sequential coal beds extending over broad areas, usually without any sign of marine (salt-water) sediments or marine fossils. Most of the coal deposits in West Virginia, western Pennsylvania, and western Maryland are of this type, and most of the layers of rock and clay in between the layers (beds or seams) of coal are of types which could not have

been laid down rapidly. The data to support this statement are very abundant and are readily available from the Geological Survey offices of the above-mentioned states. Two (briefly-stated) characteristics of the coal fields in these states which we should be careful to contemplate are: (1) Test holes drilled by the coal companies frequently show 30 or more coal beds in one 700 or 800-foot borehole, with other types of usually-slowly-deposited rock between the coal layers. (2) The well-known "Pittsburgh coal" seam (bed) has been identified in commercial thickness in four states, including extreme eastern Ohio, over an area of approximately 5,000 square miles. This coal seam shows a remarkable uniformity of thickness over this great area, and throughout 2,000 of the 5,000 square miles it averages 7 feet in thickness. (See Report of Investigations No. 10, and other publications of the Geological and Economic Survey of West Virginia, Morgantown, WV.) The June 1985 issue of Pennsylvania Geology, published by the Pennsylvania Geological Survey, states, on p. 10, that "since 1760, more than 1,000,000,000 (one billion) tons of coal have been mined from the Pittsburgh seam in Allegheny County [Penna.] alone." The article goes on to explain that this is equal to about 860 square miles of coal 1 foot thick. Remember that this is only the amount mined, from one county in Pennsylvania.

There are a few single coal beds known in the world which give some evidence of having been deposited rapidly, but these are readily distinguishable from the vast majority of coal deposits, which show distinct evidences of having been laid down slowly. Persons who say that, because a few rapidly-formed coal beds are known, then all coal was formed rapidly are using false logic, and are showing their extreme lack of knowledge of what the strata in the great coal-producing areas of the world are like.

8. An immense amount of evidence that the Mediterranean Sea was, at one time, a practically-dry, deep basin with thick layers of evaporites and marls forming in its floor--because of the evaporating, mineral-laden water. During this time when the water level was low, the Rhone River in southern France cut a deep gorge "into hard granite to a depth of hundreds of feet below sea level." This gorge and its branches are "almost comparable in size to the Grand Canyon of Colorado," but have of course been filled in and covered over by sedimentary deposition since the isthmus at Gibraltar broke and allowed the (very deep) Mediterranean basin to eventually refill. (Quotations are from the article, "When the Mediterranean Dried Up," in the Dec. 1972 issue of the Scientific American, p. 27-36.) All of this of course happened long before the creation of man in the Garden of Eden. When the report of the first years of the Mediterranean research were summarized and published in the Scientific American, most young-earth creationists dismissed it (without really reading it) and assumed that it would later be disproven. But a second Deep Sea Drilling Project expedition and a truly great amount of other research since 1972 has borne out the reality of this Miocene-to-Pliocene stage in the formation of the present Mediterranean Sea. (Scores of research reports on it are now readily available in the libraries of our nation.)
9. The Great Bahama Bank, between Florida and Cuba. This is the thickest organic bank known at the present time. It is approximately 18,000 feet thick (formerly thought to be only 14,000 feet). Most of it is practically pure calcium carbonate and/or calcium magnesium carbonate, produced as a result of the growth of lime-secreting marine organisms. This organic bank is approximately the shape of a coral atoll, and in earlier times was a coral atoll. The lack of foreign, land-derived sediments in it is one of the evidences that it was not formed by the Flood. Known growth rates of the organisms indicate that at least many hundreds of thousands of years were required for the formation of this bank.

10. The Eniwetok (also spelled Enewetak) Atoll, and similar living coral atolls. The Eniwetok Atoll consists of 4,600 feet of thickness of pure coral reef materials. It grew as a cap on top of an extinct, two-mile-high volcanic cone in the Pacific Ocean. See Chapter 3 of the book God's Time-Records in Ancient Sediments (by Wonderly) for a description of this atoll, and for coral growth rates and other reasons why such reefs required at least hundreds of thousands of years for their growth. The section "Natural Laws Which Limit Metabolic Processes of Growth" (p. 33-34) and several other pages of Chapter 3 show why it is impossible to assume that such atolls and the Great Bahama Bank were formed in only a few thousand years; and Chapter 7 deals specifically with the Great Bahama Bank. Young-earth creationists admit that these great biologically-produced atolls were not created outright by God, yet they can find no possible logical explanation of how they could have been formed within the young-earth time frame.
11. Broad expanses of ocean floor that are covered with more than 1,000 feet of undisturbed sediment which is composed of practically pure microfossil shells, without land-derived sediment (other than fine clay particles which can remain afloat for thousands of miles). See Chapter 9 of the book God's Time-Records in Ancient Sediments for a detailed description of these ocean-floor, organically-formed deposits and how they accumulate.
12. Many known, fossiliferous, continental deposits, thousands of feet thick, with the fossils showing a gradation from older, extinct species to younger forms higher up in the upper strata of the deposit. We are here referring to shell-type fossils which have no appreciable difference in size, density, or shape which could have made possible such a "sorting out" in the Flood. Also, in some places on the continents, large areas are covered, at certain depth levels, with sediments which have only marine fossils, whereas other areas--or even other depth levels at the same site--have only non-marine fossils. No hypothesis proposed by those who teach "Flood geology"--such as the "ecological zoning" hypothesis--can even begin to account for such fossil distribution. (For details, see Chapter 7 of Neglect of Geologic Data, by Wonderly.)

The question of how animals and plants were buried rapidly enough to become fossilized in a fossil record such as described above is no longer a problem. We now know that, in earth's history, there have been many earth-quake-triggered, under-water sediment flows which bury large areas. Also, sedimentologists are now able to recognize many storm deposits in the strata, with fossils buried in them.

13. The fact that large parts of the world's continents are underlain by from 1 to 4 or more miles thickness of sedimentary rock strata, and that in many areas, from one-fourth to one-half of this thickness is limestone. It is well known by petroleum geologists and others that the average thickness of limestone over the entire United States east of the Rockies is approximately nine hundred (900) feet. No such thickness of limestone could be produced in a short period of time by any conceivable natural processes. Nothing like the necessary amount of calcium and magnesium carbonate could have been available for deposit at any one time in the earth's history, even if other depositional requirements were not a problem. (See current textbooks of oceanography, and my own books, under the index headings "sea-water," "limestone," etc.) Besides the carbonate-source problem, there is also the fact that many of the limestone deposits contain unmistakable, in situ, biologically-formed parts. These include algal mats, stromatoids, and small-to-large coral reefs, all of which had to have tranquil waters and periods of time for their growth.

CONCLUDING COMMENTS

1. Strange as it may seem, most young-earth creationist teachers are almost totally unaware of the above-listed types of evidence. They have not studied the earth's sedimentary cover to any extent. If they are asked about such evidence, instead of checking the research reports or other good sources, they merely pass off the issue by saying that there is probably "some way to explain it in terms of 'the Flood model.'" They fail to realize that merely proposing a hypothetical explanation can not logically be substituted for actual scientific research. (Scientific research is not a process of merely finding a small "packet" of data and then building a scenario of your own upon it.) Many creationists also make the mistake of supposing that belief in long periods of time is equivalent to belief in biological evolution. But the best-known, conservative defenders of fiat creation during the first 100 years following the publication of Darwin's theories clearly showed us that this is not at all the case. There were also earlier Christian leaders who accepted long periods of time, but never even considered believing in evolution.
2. The above list of basic kinds of sedimentary deposits which could not have been formed by the Biblical Flood should never be thought of as a denial that the Flood did form some sedimentary strata. We must remember that the continents are enormous in area and in the number of large sedimentary deposits they contain. Again, we must avoid false logic and remember that to point out that most of the sedimentary strata on the continents are of types which could not have been formed rapidly is not to say that none of them could have been formed rapidly by the Flood. (See no. 6 in Part II above.)
3. As for answering the question posed in the title of this lecture, I hope that the material given in the above outline-summary, and the examples of evidence shown on the screen, have provided a partial reply. We have seen examples of how sedimentary geology, especially as revealed by petroleum explorations, has supplied us with much information which is compatible with the Biblical account of creation. These and other research reports are very helpful to our understanding of God's wonderful creation which He planned in the eternity past. Branches of geology other than sedimentology have also helped supply much data which further increase our understanding of the great wisdom and works of God in His creative plans and acts in the past.

We must of course admit that not all of the beliefs and theories of all geologists are in agreement with Biblical creation doctrine. But this should not prevent our using the great amount of useful and accurate data which they have discovered. This is comparable to the fact that many of the archaeologists who have discovered helpful data in the areas of Palestine, Egypt, and Mesopotamia have not believed in the divine inspiration of the Scriptures or the deity of Christ. But their wrong beliefs have not prevented us from benefiting from the realities of the past which they discovered and reported to us. In fact, much of the data from their research gives a powerful testimony and confirmation of the truth of the Bible.