A REPORT ON THE RADIO INTERVIEW OF STEVEN AUSTIN, OF THE ICR, BY D. JAMES KENNEDY, ON MARCH 15, 1995: AN ILLUSTRATION OF HOW YOUNG-EARTH CREATIONIST LEADERS CONTINUOUSLY GIVE EVANGELICALS THE FALSE IMPRESSION THAT THERE IS ABUNDANT EVIDENCE THAT THE EARTH IS ONLY A FEW THOUSAND YEARS OLD --By D. E. Wonderly

The interview centered around the supposed evidences that the Grand Canyon is very young. Three main arguments attempting to support this idea were given by Austin. They were (1) that the Grand Canyon could not have been cut through the rock formations by the Colorado River, (2) that the Grand Canyon area contains some sedimentary strata which he thinks could have been deposited and lithified rapidly, and (3) that Rubidium-Strontium radiometric dating of various Grand Canyon rocks has been inconsistent. The 3 sections below give a brief report of these three arguments, and some reasons why they can not be regarded as evidences that the Grand Canyon formations and rocks are young.

I. ARGUMENT NUMBER ONE CONSIDERED--THE ERODING POWER OF THE COLORADO RIVER

Austin stated that some "evolutionary geologists" now doubt that the Colorado River alone could have excavated the Grand Canyon, and that they are proposing that other flooding events, such as water from bursting, natural, ice-age dams, may have assisted in its excavation. Austin considers such explanations impossible, so concludes that the Canyon had to have been formed by the Biblical Flood, and that both the deposition of the strata and the excavation of the Canyon were very recent.

But a rejection of the possibility of the Canyon's having been excavated by natural processes which are familiar to us is not at all necessary. We should not discount the abilities of the following forces to move enormous amounts of rock: (1) water in motion, (2) water freezing and thawing between the exposed rock layers of the Canyon surfaces, and (3) the abrasive action of wind-carried sand. Furthermore, we do not know how much of each of these three there has been during the past geologic periods. But we do have accurate scientific indicators that there have been greatly varying climates during the past ages. For example, during the most recent ice age there had to have been more freezing and thawing of the Canyon walls than at present; and the same must have been true for all of the earlier ice ages. Also, it is definitely known that there were severe flooding events in what is now northern United States, caused by accumulated, melting, glacial water near the close of the most recent ice age.

II. ARGUMENT NUMBER TWO CONSIDERED -- THE FORMING OF THE SEDIMENTARY ROCKS

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In the interview Austin asserted that the forming of rock layers such as those in the Grand Canyon--even the main sedimentary strata--did not require long periods of time. As a supposed evidence of this he said that there was a thickness of 600 feet of sedimentary strata recently deposited below the Mt. St. Helens volcanic eruption, and that those strata have already been lithified into rock. He left his audience to believe that all kinds of lithification of sedimentary rock are the same, and that all the kinds of rock strata in the Grand Canyon are very similar to the sparselylithified, relatively soft rock layers in the deposit near the foot of Mt. St. Helens.

[A] <u>Some Dangers of Comparing Recently Lithified Sediments</u> With <u>Older Lithified Rock</u>

In making such a comparison Austin completely ignored the true nature of the great expanses and thicknesses of very hard quartz siltstone and sandstone, and the dense limestone types which are so prominent in the Grand Canyon. He also ignored the fact that these siltstones, sandstones, and limestones do not have any appreciable content of volcanic particles such as are the major component of the strata near the foot of Mt. St. Helens. There is no way to find a genuine comparison between the lithification of the major rock strata of the Grand Canyon and that of a deposit which contains large amounts of volcanic components. The rapid, but much-less-durable lithification found in sediments with a large percentage of volcanic components is entirely different from that of the vast areas and thicknesses of highly durable quartz siltstone and sandstone, and fine-grain limestone types, which are present in the sedimentary cover of the earth--including the Grand Canyon area:

The truth is that the quartz siltstone and quartz sandstone types, which are very common in North America, are composed of small grains of quartz and other non-volcanic particles, cemented firmly together with billions of microscopic-size crystals of quartz (and sometimes of other minerals). These minute crystals were built in tightly around the particles of sediment by chemical <u>precipitation</u> from water which was <u>slowly</u> <u>percolating through</u> the sediment mass. This process of precipitation of cementing-quartz crystals can be readily detected today in masses of quartz-rich sediments where natural, ion-bearing waters are percolating through the sediment mass. Quartz cementing crystals such as those found being produced in a modern mass of sediments can be readily observed tightly packed around the sediment grains, in ancient rock samples which have been ground thin enough for the light of a high-power microscope to pass through a "thin section" of the rock.

The building in of those precipitated crystals (from dissolved silicon dioxide in the percolating water) is an exceedingly slow process. But the result was the forming of series of siltstone and sandstone strata, many of which are so hard that it is very difficult to even chip them with a high-grade steel rock hammer. In fact, in the area where I live, in western Maryland, many of the "field stones" are composed of this type of quartz siltstone which is so hard that a good-grade, eight-pound sledge hammer in the hands of a strong workman is required for breaking a field stone the size of a grapefruit. And, such rocks which have been lying beside high-grade concrete structures for 80 years show no appreciable deterioration, whereas the concrete almost completely disintegrates in that amount of time. So, it is an extreme error to suppose that all types of lithification and cementation result in rock strata which are only short-lived. ("Field stones," commonly found lying in cultivated fields, are rocks that remain from higher-up layers which were eroded away after the land was last elevated well above sea level. In the area where I live, the eastern part of the strata series from which our strongly cemented field stones were derived still extends eastward beneath the Backbone Mountain, about two miles east of the fields where such rocks are abundant.)

We also need to consider the great deposits of dense, very hard limestone (and dolostone) which exist in the Grand Canyon, and in most areas east of Arizona in the United States. These deposits were lithified by chemical precipitation, in much the same manner as the siltstone and sandstone strata which are mentioned above--except that for limestone the cementing crystals which are slowly built in by precipitation from the percolating water are composed of calcium carbonate (or calcium-magnesium carbonate in the case of dolostone). See Chapter 3, section three, of my book, <u>Neglect of Geologic Data:</u> <u>Sedimentary Strata Compared with Young-Earth Creationist Writings</u> (Interdisciplinary Biblical Research Inst., 1987) for a description of the natural cementation of this type of limestone. For example, a high percentage of the strata of the great "Redwall Limestone" formation in the Grand Canyon exhibits this type of cementation, which required very long periods of time.

Besides the long-term cementation problem which Austin ignores, he needs to take note of the many parts of the Redwall Limestone and other limestone formations in the Canyon. Especially the Redwall Limestone contains large areas which are layered in such a way as to show that mats of lime-secreting algal filaments had time to grow on the thin layers of sediment which were being deposited. (Remember that algae can grow only in the presence of light.) These growths of carbonate-secreting algae were formed, buried, and fossilized, time after time, as the thin layers of limestone were being

laid down. See my book, <u>God's Time-Records in Ancient Sediments</u>, p. 139-147 (Crystal Press, 1977--available from IBRI) for more information on the Redwall Limestone, and for source references which verify the brief description I am here making. Also see Chapter 8 of the book <u>Grand Canyon Geology</u>, by Stanley S. Beus and M. Morales (Oxford U. Press, 1990), and the source references for that chapter--particularly the one by J. A. C. Bremner, referred to on p. 128 and 486.

When thinking about the strata of the Grand Canyon we need to keep in mind that the Canyon is at least as old as the oldest strata which are found as a part of the local sedimentary column there. This may seem like a simple principle that everyone knows must be followed, but in the interview, Austin was concentrating exclusively on the softer rock types which could possibly have been formed more rapidly. This resulted in his completely ignoring the presence of the older, firmly cemented rock strata of the Canyon, leading his audience to suppose that they do not exist.

[B] <u>The Problem of a Large Number of Distinct Types of Rock Units</u> in One Small Geographic Area

Even if we were to completely ignore the presence of the large and extensive units of rock which are of types that could not have been lithified rapidly, there would still be the immense problem of the large variety of <u>distinct</u> types of rock strata in the mile-thick walls of the Grand Canyon. (There are even many strata which contain <u>reworked</u> (eroded and displaced) fossils, chert nodules, and other displaced fragments of <u>earlier</u> hard rock strata, which were later incorporated into younger rock units--such as in the Supai Group and Kaibab Formation. These are not found dumped in irregular heaps, as would be the result of a violent flood, but spread out in thin layers over broad areas by normal water-movement processes.)

We must not ignore this great number of distinct and contrasting types of strata as they are found from bottom to top of the local geologic column of the Canyon. These defy all rational attempts to explain them as having been produced by a one-year flood. This problem is intensified by the fact that so many of the changes to a new type of rock--as one proceeds up the column--are very abrupt, often forming a definite unconformity.

A special problem for "flood geology" adherents arises here. The highly contrasting conditions and sediment types which are necessary for the deposition of such an array of diverse types of rock units within one relatively small geographic area are the problem. To have all these deposited in such a short time would have required many

special, localized creative acts of God during the Flood. Yet nearly all of the conservative theologians and Bible teachers within the young-earth creation movement have consistently rejected that idea. They admit that we have no license or reason to suppose that localized creative acts of God were substituted for normal depositional processes. So the substituting of imagination and superficial observation for actual data regarding the petrologic and lithologic composition of the Grand Canyon by young-earth creationist authors is entirely out of order. A valuable, semi-technical description of the different rock formations and strata of the Grand Canyon and surrounding areas, is the book, <u>Grand Canyon Geology</u>, by Stanley S. Beus, et al., Oxford University Press, 1990, 518 pages. This book contains many references to detailed microscopic studies of the Canyon rock types. A careful reading of Chapters 6 through 12 should convince anyone that the simplistic descriptions of how the Biblical Flood supposedly laid down the sedimentary strata of the Grand Canyon are fallacious. Data from actual research projects-such as Beus, et al. provide--are necessary for a true understanding of the processes which formed the marvelous series of deposits that is found in the Grand Canyon area.

Dr. Austin also made some statements, near the end of the interview, which were designed to lead us to believe that many modern sedimentary geologists do not believe that strata such as the predominating ones in the Grand Canyon were of necessity deposited slowly over long periods of time. This is of course not the case. There are now hundreds of capable, practicing sedimentary geologists who have carefully and extensively studied the deposition and lithification processes of both recently deposited and ancient sedimentary formations in many places in the world. I would challenge Austin to find even one such geologist who believes that the major sedimentary rock deposits of the Grand Canyon could have been formed rapidly. Most of those geologists are working for the petroleum industry and are not at all trying to prove evolution. Yet they know that the (divinely created) natural, physical laws of the earth which operate in the lithifying of firmly-consolidated sediments demand long periods of time.

III. ARGUMENT NUMBER THREE--RADIOMETRIC DATING

The final supposed evidence for the absence of long periods of time which Austin gave was that some inconsistencies have been found when certain Rubidium-Strontium radiation dating tests were made in the Grand Canyon. It may be that some of these inconsistencies are a problem in Rubidium-Sfrontium dating, but there are other radiometric methods (including Potassium-Argon dating) which <u>do</u> give consistent results.

Furthermore, with all that is so thoroughly known about <u>non</u>-radiometric processes of observing how certain types of rock layers are--and were--formed, it is not necessary to depend on radiometric dating in demonstrating that at least most of the Canyon rock formations are <u>many</u> millions of years old. Many of the readers of this paper already know that in the late 1960's I began to realize this fact, and decided at that time to concentrate only on <u>non</u>-radiometric evidences for long periods of time. There are so many of these evidences which are incontrovertible that no person who is studying the agreement between the Bible and the nature of the earth's crust really needs to bother with the radiometric methods. And besides, problems with radiometric methods could never invalidate the non-radiometric evidences--most of which are not dependent upon elaborate instruments or complex mathematical equations.

Yet Dr. Austin's closing statements of the interview were designed to assure the audience that there is <u>nothing</u> in the Grand Canyon or surrounding area which gives evidence of being geologically old. This is a tragic example of how the leaders of the modern creationism movement have neglected the actual data of sedimentary research for so long that they have practically forgotten that the data exist. And, of course most of them never even knew that such data do exist, because most of them have no real background in geology.

When the unbelieving world sees us rejecting practically all of the honest, highquality, scientific research that has been done on aspects of the earth's crust during the past century, how can they trust our Christian religious teaching? We Christians all believe that God created completely dependable and consistent natural laws to govern the processes operating in the natural world. Why then do so many of us refuse to believe what is clearly visible when we go out to look at God's created earth? Genesis 1:1 still tells us, "In the <u>beginning</u> God created," without telling us at all when that beginning was. (However, the remainder of that chapter does briefly describe for us, several specific acts of God in creating life upon the earth.) Very long periods of time are clearly seen in the Grand Canyon and in thousands of other locations in the world, <u>without</u> using <u>any</u> evolutionary theory, either in observing or interpreting the rock formations. So why can we not rejoice in God's plan of creation which allowed his natural laws to operate in forming rock layers?