



Is Creation Science a Pseudo-Science?

by Colin Standish

DURING 1997 a vigorous debate erupted at Virginia's Thomas Jefferson High School in Fairfax County over the introduction of a biology textbook entitled, "*Biological Science: A Molecular Approach*," a book published by the Biological Science Curriculum Study (BSCS). The attack was led by some of the parents of students at the school and the American Family Association. At issue was a statement in the textbook that "Creation science is a pseudo-science."

At stake in the dispute were two major issues: (1) The protesters believed that the designation of creation science as "pseudo-science" greatly offended fundamentalist Christians who asserted that the statement "demeans their religious belief;" (2) The protesters asked for a disclaimer in the textbook used in the public schools of Fairfax County detailing the inadequacies of evolutionary theorizing.

In the *Washington Post*, March 11, 1997, Joseph McInerney, director of BSCS from Colorado Springs, Colorado, in a letter to the editor, emphatically defended the book's assertion that creation science is a "pseudo-science." In part he stated that "this is not the first objection we have heard to our treatment of 'creation science,' nor is it our first encounter with creationists who try to force their religious beliefs into the science classroom. BSCS put evolution back into the high school biology curriculum in the early 1960s, and we have been in the middle of this dispute ever since."

Then McInerney argued, "In the current situation, there would be no dispute if creationists did not use the oxymoron [contradictory term] 'creation science' in an attempt to legitimize scientifically a view of the natural world that is grounded in revealed truth. If, for example, they had stuck to the phrase [sic] 'creationism,' BSCS would not have to point out that their position has *no scientific basis*. Part of our obligation as curriculum developers, however, is to help students--and teachers--understand what counts as science and what does not.

" 'Creationism' is part of a religious belief system. 'Creation science' is *an attempt to parlay religious belief as science*. It is therefore, a pseudo-science and we have said so straightforwardly." Ibid. (All emphasis supplied unless otherwise noted.)

Straightforwardly? Yes; validly? No! McInerney used some challengeable argumentation in his letter. First, he asserts categorically that the views of creationists are "grounded in revealed truth." In this he is correct. But he then leaves the inescapable conclusion that revealed truth has no valid confirmation in scientific observation or investigation. To Christians who have a deep faith in the Bible record of origin, on the one hand, and a strong commitment to scientific investigation, on the other, creation science is not an oxymoron. Indeed, while not claiming that all valid scientific research findings are readily

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explicable in terms of fiat [spoken into existence] creation; nevertheless, those scientists who are Christians have observed that frequently the data of scientific investigation and observations much more closely fit the creationist than the evolutionary model. This has proved true not only in their own investigations but in the investigations of agnostic scientists.

There is a commonly upheld belief that creation-believing scientists are greatly biased by subjectivity in their research and/or interpretation of the scientific data. By implication it is assumed that evolutionary scientists bring to their research a high level of objectivity. However, the authors resolutely challenge such assumptions. In their own extensive research projects they found this to be far from the case. For example, Colin, while a graduate student, was puzzled with the research of two clearly opposing behavioral scientists. Reporting their findings in scholarly journals, each sought a number of times to replicate the other's experimental design, but unfailingly each produced data that consistently confirmed his own hypothesis [assumption] and denied the hypothesis of the other. It was not difficult to deduce that subjective considerations, not dispassionate objectivity, was the explanation for the consistently contradictory findings.

Mc Inerney's letter appears to overlook one of the most basic principles of scientific investigation used in the establishment of the hypotheses. Hypotheses may validly be established upon the evidence of observation, upon the evidence of investigation, from theoretical models, or they may be ad hoc hypotheses devoid of any direct empirical [verifiable] evidence, simply reflecting the intuition of the theorist. *The one criterion of a valid hypothesis is that it is testable.* Does Biblical Creation revelation offer opportunity for investigative research? Absolutely!--in many areas. Here are some examples:

(1) The Scriptures declare "For he spake, and it was done; he commanded, and it stood fast." Psalm 33:9. This Biblical principle enunciates the fact that matter was called into existence in a moment.

This claim of Holy Scriptures is in sharp contrast to the evolutionary hypothesis which states that vast periods of time, close to 15 billion years, were necessary for the earth with all its present biodiversity [variety of plants and animals] to evolve from the big bang. Any well-conducted investigation which validly tests these two contrasting concepts of origins can offer evidence toward the confirmation or denial of these incompatible claims.

This is not only testable, it is a hypothesis that has been tested. Robert Gentry, visiting research scientist at Oakridge National Laboratories, Oakridge, Tennessee, for 13 years, researched polonium halos found in mica.¹ Gentry takes up the story:

"According to evolutionary geology [i.e. uniformitarianism]², the Precambrian granites containing these special [polonium] halos had crystallized gradually as hot magma [molten rock under the earth's surface] slowly cooled over long ages. On the other hand, the radioactivity which produced these special radio halos had such a fleeting existence that it would have disappeared long before the hot magma had time to cool sufficiently to form a solid rock. It was a true enigma [inexplicable fact]. Would I ever resolve it?" Robert V. Gentry, *Creations Tiny Mystery*, Earth Science Associates, second edition, 1988, p. 31.

Heading a team of seven scientists at Oak Ridge National Laboratory, Gentry demonstrated powerful evidence--using the most meticulous experimental design--that the presence of polonium-210 in primordial [happening first in sequence of time], Precambrian granites presented grave difficulties for the traditional big bang hypothesis that asserted that over extraordinarily long periods of time those Precambrian granites, free from fossil remains, had solidified from their original molten state. His findings, often challenged, frequently ignored, are yet to find adequate interpretation within the concepts of the big bang theory.

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To understand the findings of Gentry we will explain the process critical to his investigation. Three radioactive atoms are the initiators of a decay chain. The one relevant to Gentry's research is Uranium-238 which initiates a decay chain that ultimately ends in Lead-206. The half-life of a radioactive isotope³ is the time it takes for half of the radioactive atoms to decay. Uranium-238 presently decays at the rate of a half-life of about 4.5 billion years. Further, after another 4.5 billion years, a total of three-quarters of the uranium atoms would have decayed and after yet another 4.5 billion years (providing the decay-rate remained constant during this vast period of time) seven-eighths of all the uranium-238 would have decayed.

However, the decay from Uranium-238 to Lead-206 is a complex process involving 14 steps: Uranium-238 Thorium-234 Protactinium-234 Uranium-234 Thorium-230 Radium-226 Radon-222 Polonium-218 Lead-214 Bismuth-214 Polonium-214 Lead-210 Bismuth-210 Polonium-210 Lead-206.

Within this decay chain, Gentry became interested particularly in the three polonium isotopes in the decay chain--Polonium-218, 214 and 210. These polonium isotopes all have short half-lives. Polonium-218 has a half-life of 3 minutes, decaying into Lead-214. Polonium-214 has a half-life of 164 micro seconds, decaying into Lead-210. Polonium-210 has a half-life of 138.4 days decaying into Lead-206 which concludes the uranium decay chain.

During the decay process, all three polonium isotopes emit heavy alpha particles⁴ which travel a microscopic distance in minerals when emitted in the decay process. Each leaves a damage trail of a predictable length. When billions of alpha particles are emitted from the same center they collectively form a spherical damage pattern around the center causing color changes which microscopically appear as radio-halos. These halos are darker at the edge because damage is greater at the end of their alpha particle's "travel." Because the different isotopes travel different identifiable distances, it is possible to identify which isotopes (there are eight of the 14 isotopes in the uranium-lead decay chain that emit alpha particles) have produced the halo. Therefore it was possible for Gentry to make definite identifications of each of the three different polonium halos.

Gentry's research evidenced that polonium halos were indeed in granite rock separate from uranium. Because of the fleeting half-life of polonium, the evolutionary, big bang model, has found no credible explanation for this discovery. If molten magma had cooled into granite rock over long ages of earth's history, given the fleeting half-life of polonium isotopes, all traces of their radioactive decay would have been obliterated long before the magma cooled into granite rock.

The only credible explanation of these polonium halos is that they were formed in a situation corresponding to fiat Creation. They would have had to have occurred in less than three minutes (the half-life of polonium-218), maybe even less than 164 micro seconds (the half-life of polonium-214). To illustrate this phenomenon, when one casts a rock into a body of water, the expanding rings in the water last only a few seconds.

Of course, such a finding was intolerable to evolutionary scientists, but greatly more intolerable was Gentry's implied support for fiat Creation. Gentry's papers, submitted to *Science* and other scholarly journals had to be presented in the most guarded language. Yet a few scientists courageously commended Gentry's research, noting his meticulous experimental design and objective research.

Colin was President of Columbia Union College 1974-1978. During this period Robert Gentry was an associate professor of that institution on leave as a visiting research scientist at Oakridge National Laboratories. It was during this time that in 1976 Gentry's research made headlines in the national and international press and in the weekly news magazines.

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On one occasion one of the seven members of Gentry's research team visited Columbia Union College. Colin inquired of this scientist, an atheist, as were the rest of the members of Gentry's research team, as to his evaluation of Gentry's experimental work. The scientist answered that it was "Impeccable [flawless]--one of the most careful researchers with whom I have ever worked." Colin asked him if he understood Gentry's belief that the team's research findings supported fiat Creation. "Yes, everyone is aware of his beliefs." When the scientist was pressed to express his personal conclusions concerning the experimental results, he responded, "Well, I don't have a better explanation, but I hope that at some future time there will emerge a more acceptable explanation of the data." Such a reply indicates a great faith in evolutionary theory, a faith which refuses to accept evidence to the contrary. Is there a valid place for the scientific investigation of the creation model? The answer is emphatically, Yes.

(2) The Bible record provides information which indicates that the earth and its contents are about 6,000 years old, contrasting with the approximately 4.5 billion years proposed by most evolutionists. Once again the concepts are testable.

Robert Gentry set up experimental procedures which were to offer research data significant to the estimated age of the earth. In this study coalified wood, expected to be millions of years old, was found to be less than 10,000 years old (the sophisticated measuring device could not be refined to provide a more accurate finding, for it was designed to measure great ages of time). This finding fitted the Biblical record of earth's Creation, about 6,000 years ago, and more specifically the Noachian flood of about 4,500 years ago.

(3) The Genesis record claims that man was made by God out of the dust of the earth:

"And the LORD God formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul." Genesis 2:7.

This revelation, unable to be scientifically confirmed when recorded in Holy Scripture, has been readily confirmed by the fact that all the elements contained in the human body, including such elements as calcium, sodium, iron, phosphorous, zinc, potassium, and carbon, are found in the earth.

(4) The Bible asserts that close to 4,500 years ago, the earth was deluged by a worldwide flood which would have greatly changed the atmospheric conditions of the planet, accounting for dramatic and sudden climatic alterations which would have chaotic consequences for both animal and vegetative life. By contrast, conventional evolutionary theorizing postulates the concept of uniformity. The evidence of paleontology (the study of fossil remains), ice ages, gigantic deposits of fossil fuel, the evidence of the remains of sea life high in mountains or deep in the hinterland of continents, the sudden extinction of a vast array of species all more readily fit the Biblical record of early life on this planet. It also accounts for the sometimes erratic findings of carbon 14 dating beyond four or five thousand years, contrasting with the accuracy of this dating method for shorter time periods.

(5) The small population of the planet well into the time of the Middle Ages does not fit the much longer claims of the evidence that homo sapiens, or their hypothesized forebears, existed for a long period of time prior to the era of recorded history. The population evidence points to the recent advent of man upon the planet.

Joseph McInerney, defending BSCS's disclaimer concerning creation science, evidences little knowledge concerning the clearly testable claims of fiat Creation. Of course, there is a discernible difference between creationism and creation science. The concepts of creationism are partly testable and partly accepted by an intelligent, reasoned faith. Creation science takes only those aspects of creationism which are decidedly testable and examines them under the same vigorous conditions expected of

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evolutionary scientists. It is true, for example, that the scientific method is not able to be employed to test the creationist claim that:

"He spake, and it was done; he commanded, and it stood fast." Psalm 33:9.

However, it is valid to state that the scientific method has confirmed the principle that is involved in the claims stated by the Bible that the earth and its contents were created when energy (the mighty voice of God) was converted into matter (the earth, its gaseous environment and its animal and vegetative life). The modern advances in particle and sub-atomic physics have made this evident. The destructive power which is released when matter is converted to energy (as in a nuclear explosion) evidences the reverse principle from Creation.

Even limited to the constraints of the scientific method, creation science has an undeniable place in the theorizing and experimentation which are legitimate processes in the scientific method. That frequently creation scientists begin with a mindset established by their creationist belief system, is undeniable. But no less undeniable is the fact that many evolutionary scientists have a decidedly biased mindset which is frequently antagonistic to Christian concepts. Many accept evolution as if it is a proven theory.

In neither case does this necessarily preclude the conducting of objective research and the reaching of honest conclusions. The Christian has every right to test his beliefs, derived from revealed Scripture, in the rigorous methodology of the scientific arena, just as the evolutionist has the same valid right to test his concepts. Further, each has the right to test the validity of the other's concepts.

It would be wise for evolutionary scientists to remember their frustration prior to the Scopes trial when evolutionary explanations were routinely banned in the public school system of America. Are they not willing to recognize that there are two major understandings of the origins of the universe, both staking claims to scientific validation? Let the textbooks of the public schools offer fair treatment by skilled scientific writers, proponents of both views, to the students of today's generation. One cannot escape the suspicion that many evolutionists are insecure in their theory and fear that its serious weaknesses will be exposed should creation science be afforded an equal place in school scientific curricula.

We have seen that the research of Robert Gentry, demonstrating the presence of polonium halos in granite rock, is explainable only by instantaneous Creation. If the rock had been liquid, as necessary if evolution were true, the fleeting presence of the halos would have been erased by the very long geological periods that it would have taken the giant mass of rock to cool down. Only a Creator God could have placed the polonium halos in the solid granite as a signature of His handiwork.

1. Mica -- Any of a group of chemically and physically related aluminum silicate minerals, characteristically splitting into flexible sheets used in insulation and electrical equipment. *American Heritage Dictionary*, 860.

2. Uniformitarianism -- The theory that geologic processes in the past operated at the same rate and in the same way as in the present. *American Heritage Dictionary*, 1475.

3. Isotope -- Forms of an element characterized by a specific number of neutrons. *Handbook of Physics*, 9-4.

4. Alpha Particles -- The nucleus of Helium atoms. *Handbook of Physics*, 9-103.