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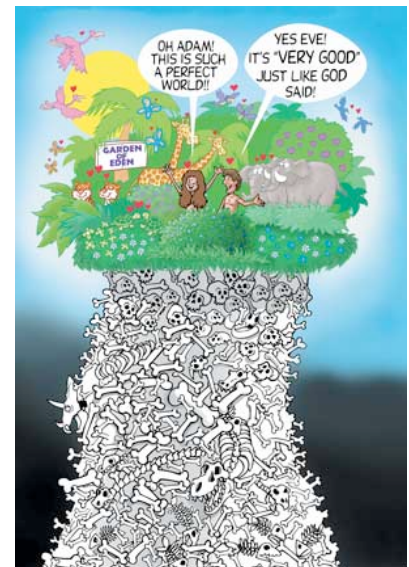
## EVIDENCES FOR A RECENT CREATION: PART 1

By David Plaisted, Ph. D.

The age of the earth is a central issue in creation-evolution discussions, because a young earth would not permit enough time for evolution to occur, and an old earth would contradict a literal reading of the Bible account of creation. The belief in an old earth is based on conventional dates for geological periods, which are in the hundreds of millions of years range, and are obtained by isotopic dating methods. Standard isotopic (radiometric) dating techniques typically yield such dates on fossil-bearing strata. There are, however, numerous disagreements between dates produced by different isotopic dating methods, and there are many cases where the dates obtained are very different from the expected ones. Furthermore, geologists are aware of a number of factors that can cause radiometric dating methods to give bad dates, and these factors are sometimes difficult to recognize. This already casts some doubt on isotopic dating methods. Creationists have given evidence that the geological column is much younger than hundreds of millions of years, but until now they have not had a quantitative method of measuring the age of the fossils or the geologic column. Nor have they had a uniform explanation for why isotopic dating methods give such old dates. This has put creationists at a disadvantage in discussions of dating issues, and also has been an obstacle in the widespread acceptance of a young earth.

Now there are evidences that explain why isotopic dating methods yield such old dates on fossil-bearing strata. These evidences also provide a quantitative measure of how old the fossils really are. These evidences show that the geological column on earth, at least from the Cambrian period onwards, was laid down in a few thousand years rather than the hundreds of millions of years assumed by conventional geology. This gives strong support to the creationary viewpoint, and provides methods of dating that are more in harmony with the Biblical creation account. These evidences also explain the old ages given by conventional methods as the result of accelerated decay. It now appears that radioactive decay was much faster in the past. This explains why isotopic dating methods typically give dates in the hundreds of millions or even billions of years on samples

that are really only a few thousand years old on a young earth. Faster decay could also be the cause of the Flood, because accelerated decay would have caused the generation of a huge amount of heat, wreaking havoc with the earth's crust. These evidences do not directly establish the age of the earth or the universe, but suggest that the earth is young.



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From Answers in Genesis

In fact, a number of evidences are fitting together so well that one has to ask how much evidence is needed for a paradigm shift. How much evidence suffices for the scientific establishment to accept the fact that the geological column was laid down very rapidly, in thousands rather than millions of years? Or is it the case that no amount of evidence will convince them? I think that the new evidences are so convincing that the scientific establishment would have a hard time refuting them in a debate. But whatever the reaction of the scientists, the evidence is now compelling enough to convince many educated people of the error of the current assumption of hundreds of millions of years for the geological column.

In the past, many creationists have attempted to explain old isotopic (radiometric) dates by assuming that the system was disturbed. Isotopic dates are often computed by measuring the amount of a parent substance X and the amount of a daughter substance Y into which X decays. If one assumes that at some time, T, in the past, no

Y was present, and no X or Y entered or left the system in the meantime, then, by measuring the amount of X and Y present and knowing the speed at which X decays into Y, one can compute the age of the system, that is, the time elapsed since time T. The more Y and the less X there is, the older the sample. This method typically gives ages in the hundreds of millions of years. Creationists often argue that the computed age is too old because Y may have been present initially, or X or Y may have entered or left the system since it was formed. However, geologists have developed sophisticated methods to account for such possibilities. Furthermore, it seems unusual that so many different isotopic methods would give old dates if these dates resulted only from disturbances in the system. Disturbances could just as well make the dates too young as too old. Now creationists are beginning to think that a large amount of radioactive decay occurred in a short time, because the rate of decay was much faster in the past.

There are two main processes by which radioactive decay occurs, alpha decay and beta decay. In alpha decay, an alpha particle is emitted from a nucleus. An alpha particle consists of two protons and two neutrons. This is the nucleus of a helium atom, and when an alpha particle is emitted, it soon acquires electrons and becomes a helium atom. Thus helium is produced by alpha decay. The other main method of decay is beta decay, in which an electron or a positron is emitted from the nucleus and a neutron becomes a proton, or vice versa. Another way that this can happen is if an electron is captured by the nucleus. If rates of decay were faster in the past, then it is reasonable to assume that alpha decay and beta decay would be sped up by different amounts, because they are such different processes.

The first evidence for accelerated decay in the past has to do with the dating of zircons. Zircons have the element zirconium in them, together with other elements. They are often used for jewelry. Zircons are used for isotopic dating because their crystal structure incorporates uranium and thorium but not lead, making them suitable for uranium-lead and thorium-lead dating. Uranium and thorium decay into lead, so one can assume that the lead in the zircon results from decay, and thus compute the age of the zircon. Although this assumption has its limitations, the idea is basically sound. Zircons on earth give dates up to about four billion years.

Uranium and thorium decay into lead by a complex series of steps, of which a number involve alpha decay. Thus helium is produced. This helium should diffuse out of the zircon rapidly. Therefore if the zircons were really hundreds of millions or even billions of years old, there should be no helium left in them that resulted from such decay. However, a significant amount of helium has been found in some zircons that give isotopic dates

of 1.5 billion years. Until recently, no one had measured the rate of diffusion of helium in zircons. In 2000 the RATE project<sup>1</sup> began experiments to measure the diffusion rates of helium in zircon and biotite. Using this data, the ages of these zircons were computed.<sup>2</sup> In other words, an age was computed consistent with the amount of helium remaining in the zircon. The ages computed in this way are between 4,000 and 14,000 years! These results support the hypothesis of accelerated nuclear decay and represent strong scientific evidence for the young world of Scripture. This shows that alleged isotopic dates of 1.5 billion years for these particular zircons correspond to true dates of between 4,000 and 14,000 years. This suggests that all these old isotopic dates correspond to very young true dates. However, these results do not yet show that even older dates are in this time range. It would be interesting to test zircons having even older isotopic dates to see how much helium they contain, and to test more zircons to see if this helium retention is a universal phenomenon.

The next evidence for a recent creation is provided by carbon-14 dates. Carbon-14 (<sup>14</sup>C) is produced in the upper atmosphere by cosmic rays and then slowly decays. The older an organic sample is, the less carbon-14 it will contain because the sample will not be absorbing new carbon-14 after it dies. An astonishing discovery made over the past twenty years is that, almost without exception, when tested by highly sensitive accelerator mass spectrometer (AMS) methods, organic samples from every portion of the fossil record show detectable amounts of <sup>14</sup>C! Giam reviewed the literature and tabulated about seventy reported AMS measurements of <sup>14</sup>C in organic materials from the geologic record that, according to the conventional geologic time-scale, should be <sup>14</sup>C 'dead.'<sup>3</sup> The surprising result is that organic samples from every portion of the fossil record show detectable amounts of <sup>14</sup>C. "For the measurements considered most reliable, the <sup>14</sup>C/C ratios appear to fall in the range 0.1-0.5 percent of the modern <sup>14</sup>C/C ratio (percent modern carbon, or pmc)." 0.1 percent modern carbon corresponds to a computed age of 57,000 years, and higher values correspond to even younger ages. This implies that the entire geologic column from the Cambrian period onward is less than 57,000 years old.

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<sup>1</sup> Vardiman, L., Snelling, A.A. and Chaffin, E.F. (Eds.) (2000) *Radioisotopes and the Age of the Earth: A Young-Earth Creationist Research Initiative*, Institute for Creation Research, California, and Creation Research Society, St. Joseph, Mississippi.

<sup>2</sup> Humphreys, D.R., Austin, S.A., Baumgardner, J.R., and Snelling, A.A. (2003) Helium Diffusion Rates Support Accelerated Nuclear Decay. Fifth International Conference on Creationism, Geneva College, Beaver Falls, PA, August 4-9.

<sup>3</sup> Giam, P. (2001) Carbon-14 content of fossil carbon. *Origins* 51:6-30

Some of the researchers tried to explain this carbon-14 as contamination, but none of their attempts to clean it were successful, and other evidence indicated that this carbon-14 was not contamination.

Organic matter consistently has a higher <sup>14</sup>C ratio than Precambrian inorganic matter. This shows that this carbon-14 is not noise and not contamination. If the carbon-14 arose from noise in the measurement process or from contamination, then one would not expect to find such systematic differences. The amount of carbon-14 must therefore indicate that these samples are very young.

Here we have additional evidence that samples alleged to be hundreds of millions of years old are in fact 60,000 years old or less. If decay were accelerated in the past, the true age would be even less than 60,000 years. There is also reason to believe that the biomass before the flood may have been 100 times larger than it is today, which would dilute carbon-14 by a factor of 100 or more. This corresponds to six or seven half-lives of carbon, or to an age of about 40,000 years. Thus the ages of these samples would be brought down to the 10,000 to 20,000 year range, and with accelerated decay the ages would be even less, consistent with the Biblical account. Another factor to consider is that there may have been less carbon-14 before the flood; the amount of carbon-14 in the atmosphere appears to be increasing even today. This would make the ages even younger.

There is even measurable carbon-14 in diamonds! Dr. Baumgardner<sup>4</sup> sent a diamond for <sup>14</sup>C dating. "It was the first time this had been attempted, and the answer came back positive—i.e. the diamond, formed deep inside the earth in a 'Precambrian' layer, nevertheless contained radioactive carbon, even though it 'shouldn't have'. This is exceptionally striking evidence, because a diamond has remarkably powerful lattice bonds, so there is no way that subsequent biological contamination can be expected to find its way into the interior." The diamond's carbon-dated 'age' of less than 58,000 years is thus an upper limit for the age of geological column from the Cambrian period onwards. "And this age is brought down still further now that the helium diffusion results have so strongly affirmed dramatic past acceleration of radioactive decay."

The fact that isotopic dates are generally too old by hundreds of millions of years, but carbon-14 dates are only too old by thousands of years, is also evidence for accelerated decay, because carbon-14 decays much faster. In general, one would expect that if decay were accelerated, all radioactive decay systems would have about the

same amount of extra decay. This is especially true if the cause of the accelerated decay was a large amount of radiation hitting the earth, because a nucleus that was hit by radiation would receive a large amount of energy and would be likely to decay, regardless of its half-life. Carbon-14 has a short half-life, meaning that it is relatively unstable and decays rapidly, so the number of atoms per unit time that decay is large. Uranium, thorium, and other substances used for isotopic dating have much larger half lives, almost all of them in the billions of years range. This means that these substances are comparatively stable and decay events are very rare, so the number of atoms per unit time that decay is very small. Therefore, if there are N extra decay events in a unit of time, these extra decay events would proportionally affect the number of carbon-14 decays by a much smaller amount than the number of uranium and thorium decays. This means that the age computed from carbon-14 would be increased by a much smaller proportion than the ages computed from uranium-lead and thorium-lead decay. In fact, this is what is observed, with carbon-14 ages typically in the 60,000 year range or less, but uranium and thorium ages typically in the hundreds of millions of years.

Here is a table of some common half-lives, showing how much longer many half-lives are than the half-life of carbon-14:

Radioactive Parent	Stable Daughter	Half-life
Potassium 40	Argon 40	1.25 billion yrs
Rubidium 87	Strontium 87	48.8 billion yrs
Thorium 232	Lead 208	14 billion years
Uranium 235	Lead 207	704 million years
Uranium 238	Lead 206	4.47 billion years
Carbon 14	Nitrogen 14	5730 years

*Editor: Parts 2 and 3 of this article will be featured in the next two consecutive TASC newsletters.*

### COMING EVENTS

**Thursday, October 13, 7:30 P.M., Providence Baptist Church, 6339 Glenwood Ave., Raleigh**

Jeff Gift, PhD. will provide a general update on the status of the intelligent design movement, including upcoming meetings and some key areas of ongoing research.

**Thursday, November 10, 7:30 P.M., Providence Baptist Church, 6339 Glenwood Ave., Raleigh**

To be announced.

<sup>4</sup> Wieland, C. (2003) RATE group reveals exciting breakthroughs!, <http://www.answersingenesis.org/docs2003/0821rate.asp>

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