

## Hasn't carbon dating proved that the earth is billions of years old? by Jonathan Lombardi

The first problem with this question would be that carbon dating is used to date thousands of years not billions. In this article carbon-14 and rock dating methods will be discussed. Two groups of people have been debating this topic for nearly fifty years. The first group is the young earth creationist who believe the earth is about 6,000 years old; creationist also believe scientific dating methods are not always reliable and have not been able to prove that the earth is old. The second group are the evolutionist who generally believe the earth is 4.35 billion years old; usually an evolutionist believes that scientific dating methods have proved the age of the earth. Chances are you probably fit into one of these groups. It is necessary to point out that it is not only the young earth creationist that believes dating methods are not reliable, but some evolutionist still believe dating methods are a waste of money and are not reliable. One evolutionist Robert E. Lee in his article in 1981 said,

“Why do geologists and archaeologists still spend their scarce money on costly radiocarbon determinations? They do so because occasional dates appear to be useful. While the method cannot be counted on to give good, unequivocal results, the numbers do impress people, and save them the trouble of thinking excessively. Expressed in what looks like precise calendar years, figures seem somehow better ... 'Absolute' dates determined by a laboratory carry a lot of weight, and are extremely helpful in bolstering weak arguments” (Lee).<sup>i</sup>

Then Mr. Lee continues later in his article and says,

“No matter how 'useful' it is, though, the radiocarbon method is still not capable of yielding accurate and reliable results. There are gross discrepancies, the chronology is uneven and relative, and the accepted dates are actually selected dates. This whole mess is nothing but 13th-century alchemy, and it all depends upon which funny paper you read” (Lee).<sup>i</sup>

Is Robert Lee right or wrong? I don't think Mr. Lee is wrong. This is an important issue question. For instance, if the earth is young, evolution would not have had enough time to take its course; if the earth is old, then the young earth creationist has no case.

To have some understanding of how carbon dating works I will describe it for you. Basically the sun shines down on the earth's atmosphere, which is composed mostly of nitrogen 14. By the sun shining on the atmosphere it makes the nitrogen 14 or (N14) atom unstable changing into a carbon 14 isotope or (C14). The small amount of C14 made each day combines with our normal carbon dioxide. Organic objects such as people, animals, and trees are either taking or breathing in carbon dioxide every day. When an organism dies it will no longer take in any more C14. So the C14 unstable isotope continues to decay. Scientist measure this decay time by a unit called half-life. The half-life of C14 is 5,730 years. Scientists then take what organic item they want to date and find out how many half-lives have passed on that object. Thus the date of an organism is found. See figure 1 to visualize the paragraph above.

# How Carbon-14 Is Produced

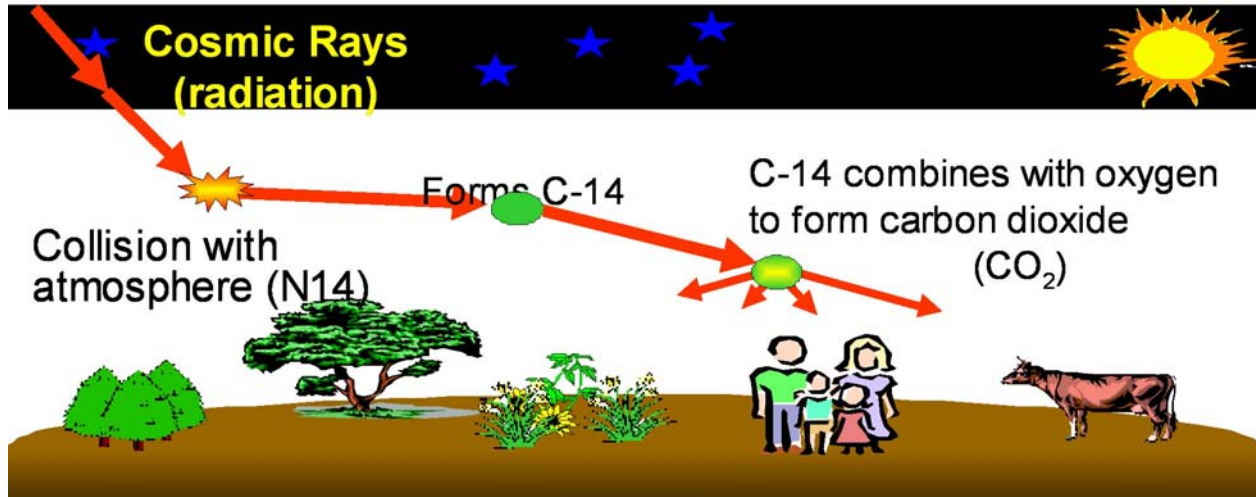


Fig. 1ii

The potassium-argon dating or rock dating methods are used for dating the age of rocks. In theory when a rock is newly formed the parent element should be 100% full. The parent element slowly decays to the daughter element, this is called natural decay. Scientist theorize by measuring the amount of natural decay of the parent element they can find the age the rock was formed. By doing this and looking at how much decay has happen, scientist can in theory find the age of a rock. Look at the figures 2 and 3 below to help visualize the passage above.

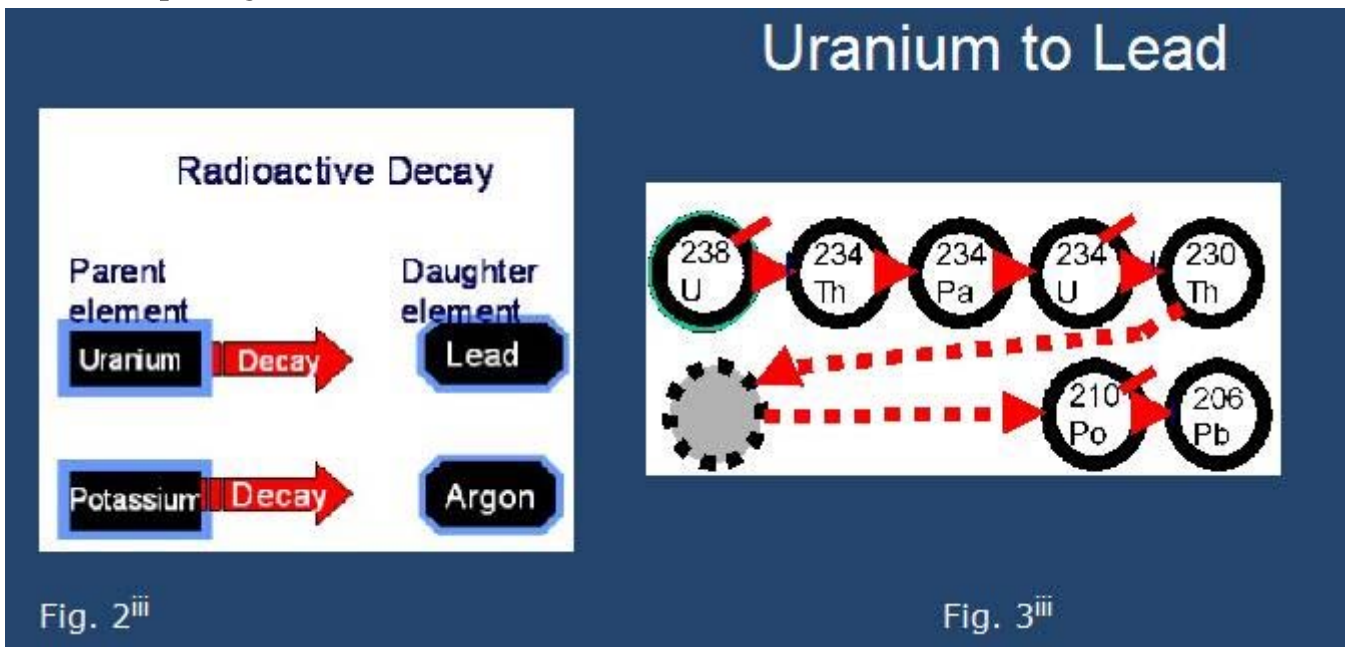


Fig. 2<sup>iii</sup>

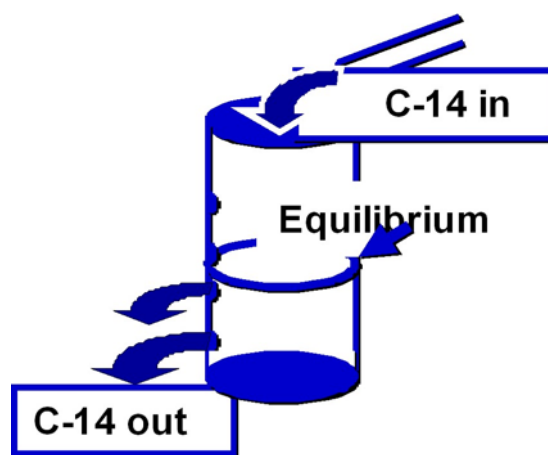
Fig. 3<sup>iii</sup>

Next we will look at the underlying assumptions in the modern dating methods. The first assumption brought out about carbon 14 is that the amount of C14 has always been the same in the earth's atmosphere. If less C14 was present in the atmosphere in the past and we base the dating method off the current amount of C14 present in the atmosphere today, we will get older dates. One idea for a person to consider is that if the canopy or water mentioned in the Bible was over the earth less C14 would have been made. The canopy of water would have block the cosmic rays from making as much C-14, which causes a real problem for the evolutionist. To find out if the amount of C14 in the atmosphere has

always been the same, one must perform the equilibrium test. Equilibrium test is just a term that is used to show that the amount of C14 created each day is the same amount of C14 consumed each day. See figure 4 for to visualize the equilibrium test. The problem, for the evolutionist, is that the earth's atmosphere has not reached equilibrium, which means less C14 is being consumed by organisms than C14 being created each day by the sun. In short this means in the past, there was less C14 present in the atmosphere than now, which means the dates we get now are based of current amount of C14, not the past amount. This makes dating methods impossible to know the true date. To better understand this assumption refer to the burning candle illustration below. Another assumption would simply be that the decay rate has always been the same, however this is usually accepted even among young earth creationists. No one has been alive 5,730 years to test this. In the case of rock dating methods four underlying assumptions are present. The first assumption is that the amount of the daughter element is known in the rock being dated. The second assumption is that the daughter element is due to radioactive decay. Another assumption would be that the sample was in a closed environment not having any out side contamination. The last assumption is that the decay of the element has always been a constant.

All four of these assumption make it impossible to determine an accurate date for a rock. To put this into a different perspective think about this situation. A person walks into a room and see a burning candle. How long has that candle been burning? The first observation would be that the candle is burning one inch per one hour. However this observation will not help that person at all.

The individual must know how tall the candle was when it started to be burned. This is the same case with dating methods. A scientist must know the starting amount of C-14 or daughter element in order to use the dating method. This becomes a real



If the underling assumptions that were brought out about dating

Fig. 4

methods were not enough for the current reader, look at the documented errors that have been accruing with the dating methods. The first example in dealing with carbon-14 dating is: living snails were carbon dated at 27,000 years old (Riggs 58).iv Living mollusk shells were dated to be 2,300 years old as well (Anderson and Keith 634).v These are just a couple of examples of problems that occurred because some scientist did not take into consideration the underlying assumptions in carbon-14 dating. When looking at known dates of rocks, why do scientists get very inaccurate dates? The first example of a inaccurate date is Kilauea Iki basalt, Hawaii which erupted in 1959. If scientists were to date the newly formed rocks they should get a date about 40 years old right? Well Kilauea Iki dated to be  $8.5 \pm 6.8$  million years old (Senlling).vi This is not a one time occurrence look at Mt. Etna basalt, Sicily which erupted in May 1964. Scientists should get a young date but do not; the rocks dated to be  $0.7 \pm 0.01$  million years old (Senlling).vi The last example is Mt. Lassen plaagioclase, California erupted in 1915 and it dated to be  $0.11 \pm 0.03$  million years old (Senlling).vi

Modern dating methods are not always reliable. I hope that you have seen that these dating methods have built in assumptions that can not be answered. If a scientist tells you that dating methods prove the age of objects or the earth he is either lying to you or he is ignorant of the underlying assumptions. Hasn't carbon dating proved that the earth is billions of years old? No! Many creationist would say, "it sure is hard to find a good date."

i Robert E. Lee, "Radiocarbon: ages in error." Anthropological Journal of Canada, vol.19(3), 1981, 9-29. Reprinted in the Creation Research Society Quarterly, vol. 19(2), September 1982, pp. 117-127 (quotes from pp. 123 and 125).

ii Riddle, Mike. "Dating Fossils and Rocks." PowerPoint presentation. 2005.

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iv Riggs, Alan. "Major Carbon-14 Deficiency in Modern Snail Shells from Southern Nevada Springs." Science. 224 (1984): 58.

v Anderson, G. M, and, M. L., Keith. "Radiocarbon Dating: Fictitious Results with Mollusk Shells." Science. 141 (1963): 634.

vi Senlling, Andrew A. "Excess Argon': the 'Achilles' Heel' of Potassium-Argon and Argon-Argon 'Dating' of Volcanic Rocks." Impact. #307 (1999). Institute for Creation Research. 26 November 2007 <<http://www.icr.org/article/436/>>.

