

QUESTION:

HAS DENDROCHRONOLOGY (TREE RING DATING) PROVEN CARBON-14 DATING TO BE ACCURATE BEFORE THE FLOOD?

by Bill Jahns

Updated February 20, 2001

Geologists and archaeologists use Carbon-14 (C^{14}) to date objects from the recent and ancient past. This dating method is called an “absolute” by many geology and reference books. Encarta Encyclopedia defines C^{14} dating:

Radiocarbon dating techniques, first developed by the American chemist Willard F. Libby and his associates at the University of Chicago in 1947, are frequently useful in deciphering time-related problems in archaeology, anthropology, oceanography, pedology, climatology, and recent geology. Through metabolic activity, the level of carbon-14 in a living organism remains in constant balance with the level in the atmosphere or some other portion of the earth's dynamic reservoir, such as the ocean. Upon the organism's death, carbon-14 begins to disintegrate at a known rate, and no further replacement of carbon from atmospheric carbon dioxide can take place. The rapid disintegration of carbon-14 generally limits the dating period to approximately 50,000 years, although the method is sometimes extended to 70,000 years. Uncertainty in measurement increases with the age of the sample.

Although the method is suited to a variety of organic materials, accuracy depends on the half-life to be used, variations in levels of atmospheric carbon-14, and contamination. (The half-life of radiocarbon was redefined from 5570 ± 30 years to 5730 ± 40 years in 1962, so some dates determined earlier required adjustment; and due to radioactivity more recently introduced into the atmosphere, radiocarbon dates are calculated from AD 1950.) The radiocarbon time scale contains other uncertainties, as well, and errors as great as 2000 to 5000 years may occur.

Dating Methods."Microsoft® Encarta® Encyclopedia 2001. © 1993-2000 Microsoft Corporation.

The article goes on to admit that mistakes can occur when measuring the amount of C^{14} . It has been asserted by some that dendrochronology (tree ring dating) has proven C^{14} to be accurate before the flood. There are several problems with this assertion. First, the oldest living tree is about 4,900 years, which means that the tree probably was not alive at the time of the flood (R.L. Wysong, *Creation-Evolution, The Controversy*, page 168). There is good reason to believe that after the flood the weather was unstable and caused trees to produce more than one ring a year. This commonly occurs today in Oregon, where trees produce two rings a year because of the wet spring and fall seasons. Changes in climate can therefore produce errors when counting tree rings.

QUESTION:HAS DENDROCHRONOLOGY (TREE RING DATING) PROVEN CARBON-14 DATING TO BE ACCURATE BEFORE THE FLOOD?

Several noted archaeologists will NOT use C¹⁴ dating because of these problems. David Rohl, an archaeologist, refuses to use C¹⁴ to date the Egyptian chronologies because he has found this method inaccurate. In the book *Pharaohs & Kings* he states:

In the late 1970s, when C¹⁴ dates were corrected by use of the bristlecone pine calibration curves, a 'problem' soon became apparent for the third millennium BC and earlier times....He suggested that the calibration of C¹⁴ dates (based on American trees) was not applicable to Egypt....This, however, was very unsatisfactory because they had to select 25 out of 55 dates, a 45 per cent rejection rate which they themselves describe as 'disappointing' --a splendid example of the arbitrary selection of dates by historians.....A. Mazar refuses to use C¹⁴ dating for Palestinian archaeological remains of the fourth and third millennia BC.

David Rohl, *Pharaohs and Kings*, Page 384-385, Crown Publishers, 1995

The reason for the conflicting data of tree rings is obvious, trees produce a ring when their growth rate changes. Often, the weather in the United States is going to vary from that in Egypt. Rohl goes on to show that the supposed "absolute" method of calibrating C¹⁴ by tree ring dating has not been as accurate as many have asserted. He refuses to use C¹⁴ dates to verify Egyptian artifacts.

Trees can also give anomalous C¹⁴ dates today:

- Wood from living trees has been dated up to 10,000 years ago (*Evolution—Creation the Controversy*, by R. L. Wysong, Inquiry Press, 1987, page 151).
- Living Mollusks in a river give dates up 3000 years when dated in a laboratory (*Science*, Vol 141, August 9, 1963).

In order to prove C¹⁴ dating accurate before the flood, there must be some way to establish what the C¹⁴ level was at that time. It is obvious that the levels of C¹⁴ have varied over time and unless a reference point can be established, the scientists dating the artifacts are simply guessing.

Another question that arises is the rate of radioactive decay. It can be proven in a laboratory that the environment affects radioactive decay. Example: The rate of decay can be altered by pressure (*Evolution—Creation the Controversy*, by R. L. Wysong, Inquiry Press, 1987, page 152). Environmental factors after the flood could have affected C¹⁴ dates.

There is good reason to doubt the supposed dates assigned by archaeologists and geologists to ancient sites. These dates are often revised and changed at a later time (see *Winter 2000/2001*, *Ministerial Quarterly*, page 16). The evidence of science does not contradict the assertions of the Bible about the time of the origin of man!