

Once upon a time ...

A review of
*The Mythology of Modern
 Dating Methods*
 by John Woodmorappe
 Institute for Creation
 Research
 El Cajon, CA, 1999

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The Mythology of Modern Dating Methods is a very important book, not only for creationists but also evolutionists. John Woodmorappe has compiled in one compact technical monograph practically every excuse, rationalisation and explanation employed by geochronologists to dismiss 'wrong' dates. And there are a large number of discordant dates, only a fraction of which see the light of publication. He does all this in a lively, challenging manner with almost 400 references to the technical literature. The evolutionist can profit from this book, if he can cope with the sometimes-harsh criticisms, by realising that he has taken dating methods too much on faith.

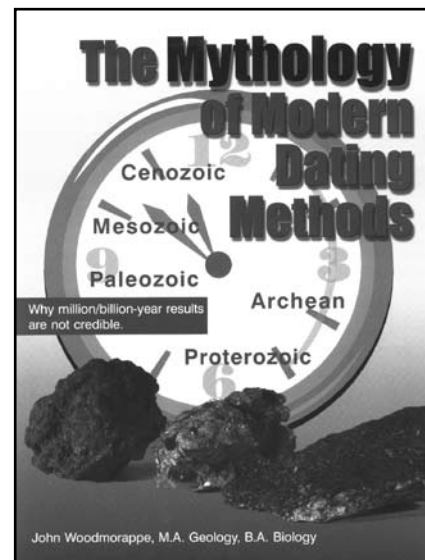
As mentioned by Dr Henry Morris in the foreword, and emphasised by Woodmorappe, dating methods are foundational to the anti-biblical philosophy of uniformitarianism and evolution. Most people assume, without thinking too deeply about it, that with millions and billions of years of time, almost anything can happen. Evolution then becomes plausible in their minds. These dating methods are likely the main reason why many Christians have compromised the clear Word of God by believing the results of uniformitarian thinking. Such Christians, I believe, find it difficult to comprehend how so many highly intelligent and knowledgeable scientists can be so wrong in their dating methods. It seems that these Christians, many of them leaders in

seminaries and Bible schools, believe computerised dating is straightforward and the resultant millions and billions of years are a matter of fact. The trouble is, they have not delved too deeply into the subject of geochronology; they trust in the results too much. This book should shake these beliefs and dispel the incredible mythology surrounding modern dating methods.

Assumptions and rationalisations

It is not claimed that all the scientists are deliberately deceitful. But they can all be wrong about the dates, because they all start with the same wrong **assumptions**. There are numerous assumptions behind dating methods, none of which can be checked independently. They have to be taken on faith. For example, geochronologists assume values for the initial isotopic ratios when the rock first cooled, even though no one was there to see it happen, or to make measurements at that time. To insist that such assumptions about the primordial abundances of isotopes are correct demands a superhuman level of insight and courage to specify how the universe came into being, how the solar system was formed, and other detailed knowledge of the earth's geologic history. Geochronologists also assume that the rock was chemically undisturbed for millions and billions of years, and that the radioactive decay rate was constant over all this time. A good elementary book explaining dating methods from a creationist perspective is *The Young Earth*.¹

The unprovable assumptions are not the only problem with radiometric dating. A bigger concern is in the way the results are handled. One huge problem is that the results published are only a **selected sample**, chosen especially to agree with preconceived ideas about the earth, life, and evolu-



tion. Geochronologists do not deliberately choose a rock sample that will give a 'wrong' date. Rather, it is **after-the-fact**, when the result disagrees with what is expected, that the sample is deemed to be defective. Woodmorappe compares this process with floating helium balloons for shooting practice. If the date is not obviously 'wrong' it is floated (published) to see whether anyone will try to shoot it down — whether there are some factors, not previously considered, that would disqualify it. Amazingly, there is a complete 'catalogue' of standard rationalisations that are used to account for dates that disagree with what is expected — more on this later. The dating balloon can be shot down at any time, even after many years of floating around in the literature. Most of Woodmorappe's book delves into these rationalisations that are used to explain away the dates when it suits.

Woodmorappe uses numerous quotes to demonstrate his points — the long-ager's own words from the literature. Upon reading the book, some may think that Woodmorappe is exaggerating. However, when studying the geological literature, it does not take long to come across these rationalisations. I have encountered practically every one of the excuses, plus many overly optimistic statements touting the merits of a particular dating method. In fact, this phenomenon is

described in detail, showing how practically every dating method was first advanced with optimistic statements about its expected great accuracy, only to have the claims qualified and challenged as many problems were progressively discovered.

Rationalisations are after-the-fact reasons to discard ‘wrong’ dates. Some of the more common ones include: open system behaviour, mixing behaviour, special conditions that operated in the magma chamber, hydrothermal alteration, weathering, **hidden** xenocrysts,² innumerable ‘metamorphic events’ that reset or partially reset the dating method, etc.

In his own humorous but penetrating way, Woodmorappe exposes the multitude of excuses, rationalisations, and explanations, used by uniformitarian scientists to discount their own dating results when it suits them. He classifies them into the following three broad strategies which he describes in the introduction, and refers to in an abbreviated form throughout the book:

- 1) **CDMBN** — **C**redit **D**ating **M**ethods (for ostensible successes); **B**lame **N**ature (for failures). If the date is ‘good’ the method is given the credit, but if the date is ‘bad’ there is some problem with nature that disturbed the system and gave the wrong result.
- 2) **ATM** — **A**ppel **T**o **M**arginalisaton (minimising the failure). If the date is ‘wrong’, don’t worry. It is only a small isolated incident and does not impact on the unquestioned reliability of the dating method itself.
- 3) **ATT** — **A**ppel **T**o **T**echnicalities. Of course the date was wrong. We would expect a wrong answer in this case because ... (of some technical reason).

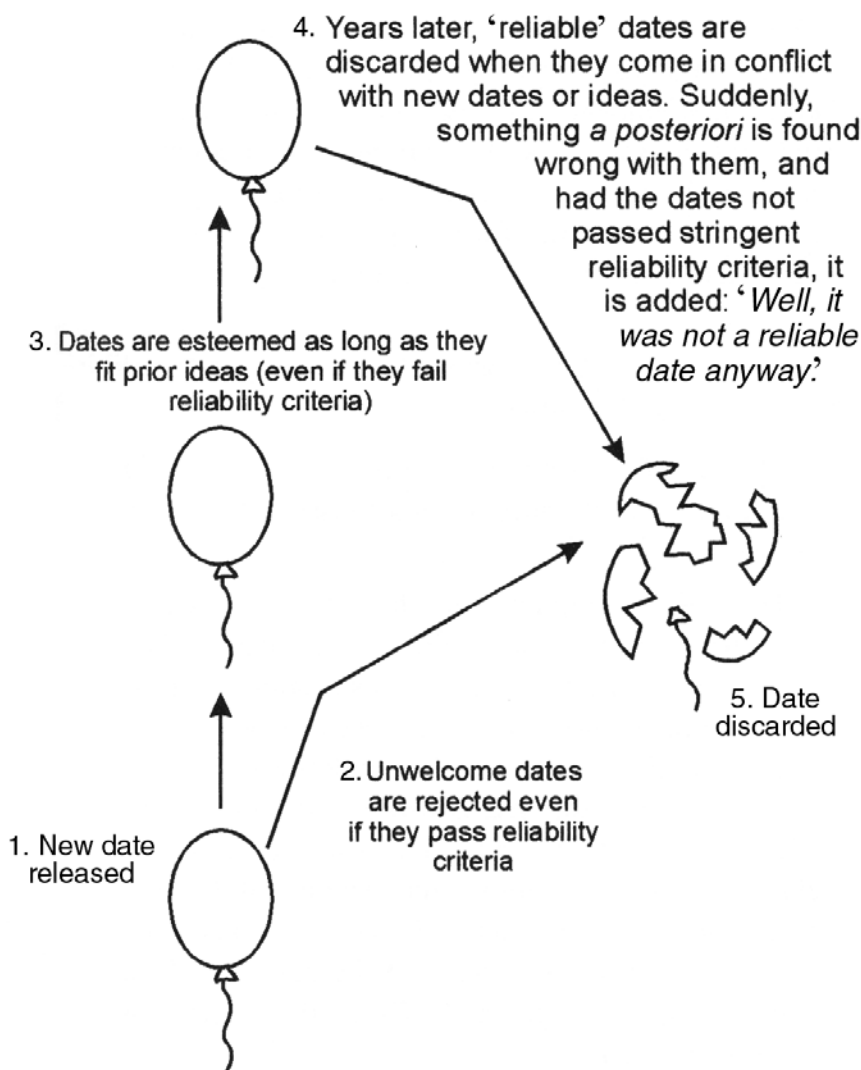
Remarkably, there are cases where the dates obtained from the radioactive methods are older than the accepted age of the earth. Even more amazing, the calculations occasionally produce negative numbers! Rather than a date in the past, this suggests a date well into the future — obviously

an impossible result! Despite all this, the dating methods themselves are rarely questioned. Furthermore, the geochronologist can actually turn a dating liability, such as the problem of open system behaviour, into an asset. How? Simply, for example, by postulating a ‘metamorphic event’ when the date is younger than expected. There does not have to be any independent geological evidence for such an event. Such rationalisations should alert other scientists, and naive Christians, to question the methods themselves and realise that dating methods are too plastic and unscientific to be believed. As Woodmorappe puts it:

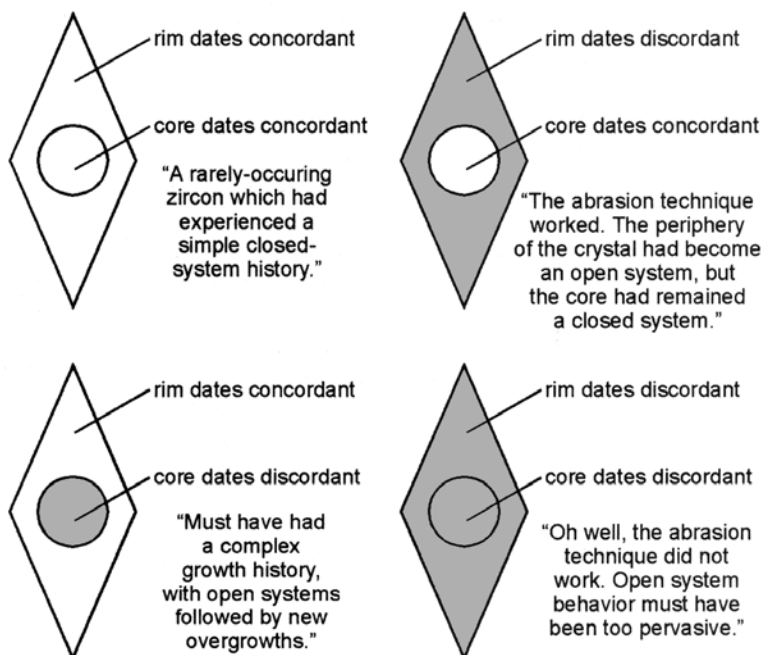
‘...there is no such thing as an *in-nately credible date*. Further proof of this is the fact that *uniformitarian geochronologists often cannot agree which particular dates to accept as reliable, and which to explain away.*’³

The ruling paradigm

These are serious claims. If all this is true, some may be thinking, why don’t other scientists discover it? Surely Woodmorappe is not claiming that geochronology is a huge conspiracy. The reason why the exaggerated claims of geochronology continue,



*All isotopic dates are trial balloons — they can be rejected **after-the-fact** when found to disagree with what is expected. Reliability criteria are always subordinate to geologic interpretation in the field when evaluating the reliability of dates (after Woodmorappe).¹⁴*



Uranium-Lead (U-Pb) dating technology is now so sophisticated that the cores (circles) and rims (diamonds) of individual zircons can be 'dated' separately. This gives four possibilities from one single grain, as illustrated by the hypothetical responses in quotes. A 'pick and choose' method of interpretation is applied — disagreement is never counted as evidence against the dating method itself (after Woodmorappe).¹⁵

Woodmorappe explains, is not because uniformitarian scientists have a clandestine plan to deceive the public, but because they have a common belief in the underlying assumptions. They have a common worldview — a ruling paradigm. Furthermore, because of social factors such as peer pressure, the competition for grant money, and the reinforcement syndrome, the straightjacket of the paradigm keeps everyone in line. The reinforcement syndrome — the practice of finding the same date or results (after rejecting many 'trial balloons'), is the main force perpetuating the mythology of the dating methods.

But don't the dating methods agree with the fossil dates that were used to set up the geological column? Surely this proves that the dates and evolution are both true, according to uniformitarian arguments. Not so. Woodmorappe shows how this agreement is a **forced agreement** dictated by the ruling paradigm. It is the ages of the fossils in the geological column that are presumed to be correct, and the results of the other dating methods

must agree. Otherwise they are judged to be wrong.

Woodmorappe well illustrates the power of the ruling paradigm by the way the Cambrian/Precambrian boundary has been dated. In this example, the dates obtained by geochronology have simply conformed to the presumed date of the boundary that was set before the turn of the century — before geochronology was invented.

This is hard for many to believe, but it is the practice nonetheless, and not difficult to discover from the literature. Woodmorappe has plenty of quotations from uniformitarian research literature to support this claim, such as the following:

*'Often it is not easy to reconcile different isotopic dates, and many age determinations which do not agree with currently accepted time scales are simply rejected as wrong without fully understanding why.'*¹⁴

The quote is self-explanatory. Good dates are those that agree with the field relationships, evolution and the geologic column. Is it any wonder

that the fossil dating scheme, as well as the radiometric dates used to bolster the fossil dates, have been 'verified'? Woodmorappe summarises it in his own penetrating style:

*'Particular isotopic dates, and interpretations of them come and go. But the central belief in their overall validity, and in the validity of the multibillion year age of the earth, is never open to serious re-examination. Any, and all discrepant data is simply explained away ...'*¹⁵

Don't the methods agree?

But don't the various dating methods 'agree' with each other? Surely when several independent dating methods all arrive at the same date, the result has to be correct? This is a powerful uniformitarian argument, but it too is a facade. Woodmorappe shows that all this supposed 'agreement' is really quite artificial. He even dedicates chapter 9 to an exploratory study demonstrating that some dates will agree just by chance. In the study he assumed that the dates published represent all the dates measured, a conservative assumption since in practice only a selection of the measured dates are published — those within range of the 'correct' value. Nevertheless his preliminary work shows that dates from the same or different methods can agree by chance some of the time, and this may well be enough to explain what occurs in practice. Thus, with all the myriad of rationalisations, all the different dating methods can be coaxed to the 'correct' date as determined by the fossils and geology.

Those who do not think that dates can be manipulated to agree, should read Marvin Lubenow's book, *Bones of Contention*.⁶ In appendix A, **The Dating Game**, Lubenow demonstrates from the dates published in the literature how six different dating methods 'agreed' that Richard Leakey's skull 1470 was 2.6 to 2.9 million years old. That was not the end of the story because all these dates were later rejected, reworked, and made to 'agree' on an age of 1.6 to 1.8 million years.

Photos by Andrew Snelling



A rare find of wood (left) entombed at the bottom of a basalt flow provides opportunity to check radioactive dating methods. Note leaf impression preserved in basalt sample (right). Measurable quantities of ^{14}C were detected in the wood confirming that its age must be less than 50,000 years, yet K-Ar 'dating' of the basalt yields 'age' of 45 million years. Something is wrong with the K-Ar results. Wood and leaves are similar to plant species growing in the region today suggesting basalt flow occurred in the post-Flood era. The real age of the basalt and wood is thus only about 4,500 years.¹⁶

A devastating critique

John Woodmorappe's book is a devastating critique of the mythology of modern dating methods. A generous supply of diagrams is used to illustrate the points in an incisive and often humorous way. The book has an index and an innovative new feature — 100 frequently asked questions about radiometric dating and where to find the answers. If you are familiar with dating methods, you should have no trouble understanding this book. However, non-scientists and those without training in geology, geophysics or geochronology may find it difficult to follow some of the arguments. For these people an appropriate introduction to dating methods in general, and selected methods in particular, would have been helpful. For example, it would have been advantageous to briefly describe the $^{40}\text{Ar}/^{39}\text{Ar}$ method and also explain how zircons are dated by the U-Pb method. Also, a glossary would have been useful. To make the information from this book available to a wider audience, I recommend more descriptive and explanatory information in the next edition. Nevertheless, the non-scientist can still profit greatly from the book; they can get the gist of the problem, and have an excellent selection of quotes at their disposal — quotes that are very revealing.

The book makes an excellent addition to the work John Woodmorappe has already published, like his catalogue

of hundreds of 'wrong' dates from the literature.⁷ It also complements the creationist radiometric dating research. For example, based on the same uniformitarian dating methods, this research shows that **recent lava flows, known to have cooled within the past hundred years or so, produce dates of millions of years,**^{8,9,10} and that actual dating results are far more variable than those published by geochronologists.^{11,12}

The Mythology of Modern Dating Methods vividly shows that there are big problems with the millions and billions of years that radiometric dating methods produce. The most obvious possibilities include open system behaviour during the Flood, accelerated decay rates at some time in the past (during the Creation or the Flood), and other such similar mechanisms. In the future, creationists will be actively researching the possibilities.¹³

The Mythology of Modern Dating Methods is highly recommended for everyone — creationists, earth scientists and non-earth scientists alike — especially evolutionists!

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