

More Classic Misquotations in Woodmorappe (1999)

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Woodmorappe (1999, p. 28) cites the following sentence fragment from Zeitler et al. (1987, p. 2865):

"Geologists currently interpret most mineral ages as cooling ages ... "

Woodmorappe (1999, p. 28) assumes that this phrase refers to mineral ages in general. On the basis of this questionable interpretation and lots of other inappropriate extrapolations from the literature, Woodmorappe (1999, p. 28) argues that minerals provide unreliable crystallization ages with any radiometric method. Even IF this phrase from Zeitler et al. (1987, p. 2865) refers to radiometric dating in general and not just to the rarely used U-Th-He method, Zeitler et al.'s in context statements hardly provide any comfort to YECs:

"As only a limited number of practicable radiogenic systems are available to geochronologists, we feel that the U-Th-He system represents TOO VALUABLE a resource to remain neglected, particularly given the ADVANTAGES of U-Th-He dating: the low concentration of He in the atmosphere (~5 ppm), leading to very low contamination of samples, and the fast production rate of He from the decay of U and Th (decay of each atom of ^{238}U , ^{235}U , and ^{232}Th involves the production, respectively, of eight, seven and six alpha particles). Geologists currently interpret most mineral ages as cooling ages, and we follow Damon and Green (1963) in suspecting that many of the too-young U-Th-He ages reported in the literature may represent USEFUL measurements of thermal history, not recalcitrance on the part of the U-Th-He system." [my emphasis]

The U-Th-He method is seldom applied because helium, unlike heavier or non-gaseous daughter products, may readily escape from most minerals (Krauskopf and Bird, 1995, p. 247).

Woodmorappe (1999, p. 38–39, 43) also cites a number of other references and claims that geologists often arbitrarily reject dates simply because the results are supposedly inconsistent with the geologists' desires. However, many of Woodmorappe's quotations are blatantly out of context and, when they are read in context, they clearly indicate that the scientists had good field, chemical, mineralogical and/or other laboratory evidence for rejecting certain dates and supporting others. For example, the following quotation by Woodmorappe (1999, p. 39) is from Kawano and Kagami (1993, p. 174):

"... it appears that four of the five samples yield an isochron age of 31 Ma. This is not in agreement with a K-Ar biotite age of the body of 55 Ma ... [reference omitted]. We therefore interpret the Rb-Sr whole rock isochron age of 31 Ma as a pseudo-isochron because the Rb-Sr whole rock isochron age is younger than the K-Ar biotite age for the same body ... [references omitted]. In this case, the pseudo-isochron may represent a mixing line between the source magma and upper crustal material."

By only reading this partial quotation from Woodmorappe (1999, p. 39), Kawano and Kagami (1993, p. 174) appear to have inappropriately rejected a fairly good isochron with an age of 31 Ma simply because they favored a date of 55 Ma. However, the presence of the ellipse (...) should be a red flag to any reader and, in the case of this quotation, it shows that Woodmorappe (1999, p. 39) has omitted a crucial phrase from the quotation. The entire sentence from Kawano and Kagami (1994, p. 173-174) reads:

"Although the five samples from the Ichi body do NOT define an isochron, it appears that four out of the five samples yield an isochron age of 31 Ma." [my emphasis]

It's obvious from the diagram in Figure 2 of Kawano and Kagami (1993, p. 174) and when Kawano and Kagami (1993) is read in its proper context that the scatter of all five data points is too great to yield a valid isochron. Based on the scatter of all five points, Kawano and Kagami (1993) are justified in rejecting the Rb-Sr results as a pseudoisochron. By omitting this phrase, Woodmorappe (1999, p. 39) mischaracterizes Kawano and Kagami (1993) as being arbitrary and subjective.

In another classic example of distorting the literature, Woodmorappe (1999, p. 69) quotes the following statement from Smith et al. (1994, p. 297) out of context:

"Some of these samples yield very good isochrons yet give apparent ages which are significantly younger than the primary ages."

This quotation appears to indicate that even nice looking isochrons may fail to provide reliable dates. However, what kinds of samples are Smith et al. (1994) referring to and do they consider these apparent ages to be geologically meaningless? Here's the sentence in context:

"The age control provided by the dates on the volcanic intercalations allows the significance of apparent ages measured on the INTERVENING LACUSTRINE SEDIMENTS THEMSELVES to be tested. Some of these samples yield very good isochrons yet give apparent ages which are significantly younger than the primary ages. These ages (110.3 +/- 0.2 Ma) MAY signify alteration events." [my emphasis]

In reality, previous dating on volcanic rocks was so impressive that Smith et al. (1994, p. 297) used the Ar-Ar methods to date the associated ancient lake sediments. Like K-Ar, Ar-Ar dating doesn't always work on sediments and sedimentary rocks because of the poor development of well-crystallized clay and other argon-trapping minerals. Nevertheless, Smith et al. (1994) argue that the Ar-Ar results may be real and date post-sedimentation alteration events.

Also, Smith et al. (1994) present the following positive results on their volcanic samples, which undermines Woodmorappe's claims that radiometric dating is unreliable:

"A basalt from the Yixian Formation near the base of the [Rehe] Group gives an age of 125.4 +/- 0.2 Ma, whereas an andesite from the overlying Jiufotang Formation gives 121.7 +/- 0.4 Ma. Ages from intervening horizons are, within their uncertainties, in SEQUENTIAL AGREEMENT with these enclosing strata.[my emphasis]

These results show that the lower half of the Rehe Group, with its characteristic fauna of endemic fish, dinosaurs and other taxa, was deposited within a short time interval of 3-4 Ma during the lower Cretaceous and contains no strata of Jurassic age."

Rather than discussing the overall positive statements about radiometric dating in Smith et al. (1994), Woodmorappe (1999, p. 69) chooses to find and misquote about the only pessimistic statement in this abstract.

Woodmorappe (1999, p. 68) cites the following statement by McDougall and Harrison (1988, p. 122) to attack the validity of K-Ar isochron dating:

"A drawback of the conventional isochron plot is that, in general, the isotope measured with the poorest precision, ^{36}Ar , is common to both axes. A result is that the errors associated with both axes are highly correlated, and may give rise to misleading linear correlations."

However, in another classic example of quoting out of context, Woodmorappe (1999, p. 68) leaves out the following subsequent statement by McDougall and Harrison (1988, p. 122):

"These problems are LARGELY CIRCUMVENTED by an alternate form of isochron analysis in which $^{36}\text{Ar}/^{40}\text{Ar}$ is plotted against $^{39}\text{Ar}/^{40}\text{Ar}$...[references omitted], thus using ^{40}Ar as the reference isotope...[reference to figure omitted]. Because ^{40}Ar usually is the most abundant isotope and therefore can be measured very precisely, the correlation between errors in both ratios is SMALL and OFTEN NEGLIGIBLE." [my emphasis]

When the contexts of the original citations are checked, it is clear that Woodmorappe has a strong religious bias that precludes him from fairly summarizing the literature on the strengths and weaknesses of different radiometric dating methods. We can only hope that Woodmorappe and his allies are better at quoting the Bible in its proper context.

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