A strange admixture of erosion geology and tendentious theology

Stories About Earth's History: A geologist's dissent from deep time

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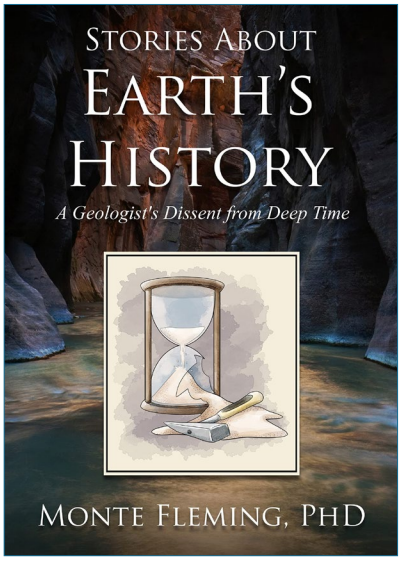

John Woodmorappe

Author Monte A. Fleming is an Assistant Professor of Earth Sciences and Biology at Loma Linda University, a Seventh Day Adventist University, in California. This book is short (125 pages), non-technical, and easy reading in a conversational style.

In this work, Fleming shows that erosion rates are a glaring problem for an old earth. Erosion rates are not just moderately inconsistent with an old earth, they are inconsistent by orders of magnitude. He indicates that he has extensively studied the literature, and it does not look like uniformitarian geologists have ever addressed, let alone solved, this problem.

North America—gone in only 4.2 million years

Fleming cites an average figure of 78 cm (31 inches) for the erosion of the Pacific Coast, and 20 cm (8 inches) average for erosion of the Atlantic Coast (figure 1). (I assume that these average figures account for all the locations, along the coasts, where deposition instead of erosion is taking place.)

At these stated rates, the North American landmass should be completely removed in only 4.2 Myr, with the meeting point of the Pacific and Atlantic near present-day Salt Lake City, Utah. Of course, Fleming is not saying that North America is actually 4.2 Ma old; he is saying that North America can be *no more than* 4.2 Ma old.

Actually, since North America is still there, it means that it is much, much less than 4.2 Ma old. The width of the continental shelves suggests a maximum time frame of much less (covered in the book).

Note that uniformitarian plate tectonics does not rescue North America. It has been a stand-alone continent many times longer than the 4.2 Myr needed to wipe it out.

Fluvial erosion alone wipes out all continents in just 22 million years

As if to make the uniformitarian problem even more severe, we can

completely ignore shore erosion and focus entirely on the continental matter that is removed by all the world's rivers. Fleming has done so, and, at the rates seen at present, the continents should all be gone in 22 Myr.

If anything, 22 Myr is an overestimate. This is because the sediment-removal rates of rivers usually consider only sediment in suspension and neglect the sediment in traction.

They also neglect a vast amount of sediment trapped behind tens of thousands of dams that impede the flow of rivers around the world, as is mentioned in the book.

However, I am not sure that erosion rates are independent of the topography. Could it be, instead, that erosion rates are high at times of high relief (as today) but become much smaller as the continents approach peneplanation? This should be considered.

Erosion and floating continents—no escape for uniformitarian geology

The author deconstructs the counter-argument that continents, which float on the mantle, rise up as they are in the process of being removed by erosion. He compares this consideration to an ice cube floating in water. If a piece of the ice cube is chipped off, the remainder of the ice cube will compensate for the loss by rising to a higher level in the water.

The problem with the continent-rising idea is that, were it a viable solution to the erosion problem, tens or perhaps hundreds of kilometre thickness of rock would have to be removed everywhere from every continent. There would be no Phanerozoic sedimentary rock left anywhere on Earth. Yet there are, and so the rising-continent idea does not even begin to solve the continental erosion problem for uniformitarians.

What is the maximum age for Mt Everest?

Fleming cites several estimates for the rising and denudation rate of Mt Everest and concludes that Mt Everest can, at most, be 4.6 Ma, not 40 Ma as conventionally assumed. This is an order of magnitude less than standard uniformitarian estimates, which are largely based on the timing of the plate collision of India with the remaining Asian landmass.

He expands this consideration to encompass the erosional removal of the entire Himalayan Mountains. He even cites a uniformitarian estimate, based on their ideas of the antiquity of the Himalayas, that long-term erosion rates must have been only 2% of the rates that are inferred from the volumes of sediment removed by rivers today. This is a staggering discrepancy and is, itself, an indirect admission that the inferred uniformitarian age of the mountains is, at best, not just exaggerated, but is ridiculously exaggerated. After all, what quasi-magical process would make today's observed erosional removal rates nearly two orders of magnitude greater than the uniformitarian-inferred long-term rates?

Catastrophism and the young earth

The author turns his attention to the vast areas covered by the Coconino Sandstone in the USA. No geologic process operating today is producing any comparable area and volume of sandstone, and Fleming suggests that it points to a catastrophic origin. In addition, paleocurrents in the Phanerozoic sedimentary rocks of much of North America point in the same direction. This strongly suggests a single worldwide Flood forming them, and not multiple 'ordinary' depositional events (of rivers, lakes, and seas) spanning a total of hundreds of millions of years.

Fleming brings up the unexpected ^{14}C anomalies found in ancient organic material. ^{14}C has a half-life of 5,730 years, meaning that all of it should be gone after about 20 half-lives (114,000 years). Yet, oddly enough (to uniformitarians, that is), measurable ^{14}C has been found in coals and other onetime organic materials that are supposed to be tens or hundreds of millions of years old.

Another line of evidence for a young earth is the persistence of DNA in dinosaur fossils. Were they actually a hundred million or more years old, their DNA should have broken down a long time ago. Yet—surprise—the DNA is still there. A number of creationist scholars are doing research on this fact.

Too much time in specific sedimentary formations

Fleming has extensively studied the Pisco Formation in Peru. Its 640 metres are supposed to span 13 Myr. He finds consistent evidences of rapid deposition throughout, with no indicator of prolonged hiatuses in deposition, and no evidence of erosional removal of previously deposited sediment.

Where burrowing has destroyed the primarily sedimentary fabric, it has done so only partly. This argues for not enough time for burrowing to completely destroy the fabric. (If it is suggested that burrowing organisms were not present, then one must answer why such organisms would have stayed away from this sediment for such prolonged periods of time.)

The author could have made his line of argumentation much stronger by focusing on condensed beds. As discussed in my book,[1] these are Triassic and Jurassic sedimentary beds, each about a metre or less thick, that contain admixtures of up to several million years' worth of ammonites. Not explained is how sediment could

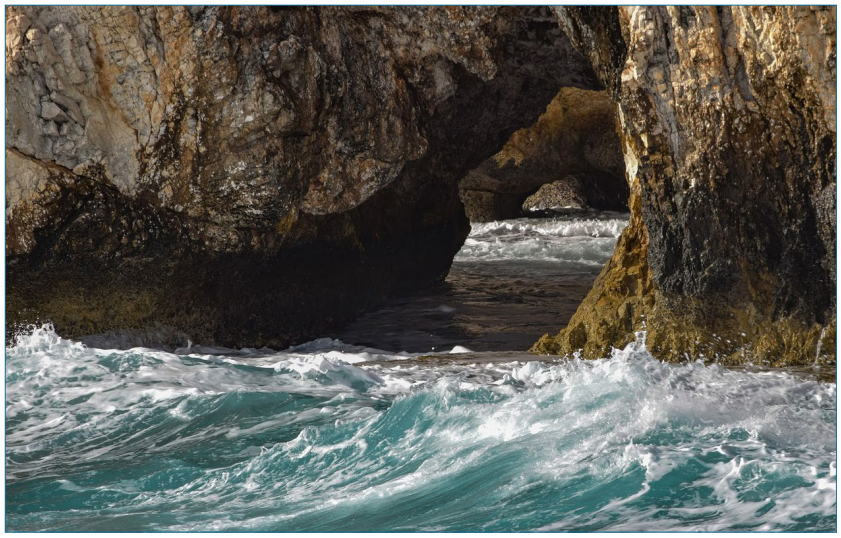

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Figure 1. In time, coastal erosion can remove entire continents.

possibly be repeatedly deposited and winnowed out, over millions of years, while failing to pulverize the millions of years' worth of ammonites.

'Missing' geologic periods—paraconformities revisited

The author expands the foregoing discussion about 'missing time'. He focuses on entire 'skipped' geologic periods. For instance, a Devonian limestone may grade imperceptibly into a subjacent Ordovician limestone. Tens of millions of years of Silurian strata are missing in this seamless Devonian–Ordovician combination, and we are asked to believe that there were tens of millions of years of non-deposition and/or erosion, without leaving any traces of it. In other words, the Silurian time is imagined: it is not the product of empirical observation, but it is read *into* the rock record. It is nothing more than the product of blind conformity to the doctrinaire uniformitarian timescale.

Fleming is saying nothing new. Paraconformities and their *ad hoc* invention of 'missing' time have long been pointed out by other creationist geologists, such as George McCready Price,[2] Whitcomb and Morris,[3] Ariel Roth,[4] and me.[5]

This has further significance not mentioned by the author. In the newer idea of sequence stratigraphy, 'paraconformity' is now replaced by the term 'onlap surface'. But the name change does not make it any less unempirical. This sobering fact should serve as a warning to those creationists that uncritically accept sequence stratigraphy. Clearly, sequence stratigraphy is an unempirical and theoretical uniformitarian construct that depends upon uniformitarian ideas for its workability and should not be 'imported' into Flood geology.

A tendentious digression

At one point the author does something which I found very surprising, to say the least; he diverts his attention from geology (the stated focus of this book), instead proclaiming and defending various controversial theological positions unrelated to geology. For example, annihilationism vs eternal conscious punishment after death, and 'soul sleep' vs the existence of a conscious soul apart from the body.

Unfortunately, in doing so the author also came across to me as somewhat condescending, even at times uncharitable towards those holding mainstream Christian views different to his own.

This review is not the place to engage in assessments of the biblical merits or otherwise of his positions on such things. I mention his inclusion of these matters so that prospective purchasers of the book are not as surprised as I was at this *non sequitur* deviation from the matters proclaimed on the cover.

Conclusions

The author has accumulated a considerable number of details about erosion rates that point to an earth considerably younger than 4.5 Ga old, at the very least three orders of magnitude younger. These include the erosional destruction of mountains and entire continents. It deserves serious consideration.

I would hope that a future edition of this work will expand the geology. The mission his subtitle refers to—dissenting from deep time, which undermines biblical authority for *all* Christians—is commendable. His theological diversions not directly relevant to that mission don't seem to belong here. I think his arguments would be greatly aided by removing them.

References

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3. Whitcomb, J.C. and Morris, H.M., *The Genesis Flood*, Presbyterian and Reformed, Philadelphia, PA, pp. 207–211, 1961.
4. Safarti, J. (interviewing Dr Ariel Roth), 'Millions of years' are missing, *Creation* **31**(2):46–49, 2009; creation.com/flat-gaps.
5. Woodmorappe, ref. 1, p. 140.