

Rigid uniformitarianism and a hysterical fear of the scientific creationist bogeyman

Timefulness: How thinking like a geologist can help save the world

Marcia Bjornerud

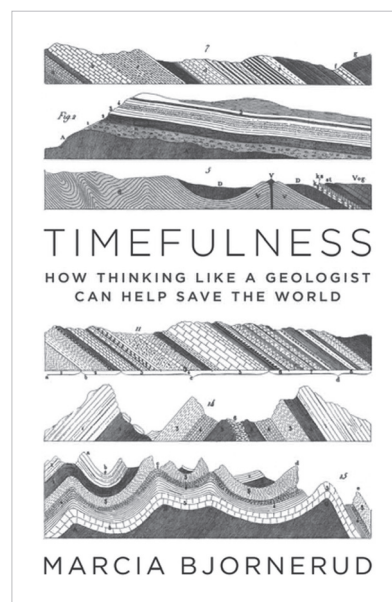
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John Woodmorappe

Marcia Bjornerud is identified as professor of geology and environmental studies at Lawrence University. This lite book is a rather superficial overview of natural history, as viewed through the lenses of the evolutionary-uniformitarian paradigm. With this, the author attempts to connect historical geology with her obvious climate change and environmentalist agendas. The latter includes her prejudices against fracking, which features an uncritical repetition of claims about the alleged environmental damage that it causes. She also throws in some jibes against creationist scientists, including her dislike of creationist uses of evidences that support the creationist position.

Rapidly crystallized macroscopic igneous minerals

About the only positive feature of this book is the recognition that the crystals in pegmatites can grow at rates of inches per year (p. 127). (Throughout my years of undergraduate geology training, I was taught, as indisputable fact, that millions of years are necessary for crystals in a cooling magma to grow to macroscopic size.) In contrast, a



cited study¹ arrives at galloping crystal growth rates of 10^{-6} cm/sec to 10^{-5} cm/sec. This comes out to a 1 cm crystal grown from the magma in 1–12 days.

Doctrinaire uniformitarianism

The author effortlessly confuses observation and interpretation whenever she discusses geology. For example, she brings up (as monotonically do so many other books) the unconformity at Siccar Point, Scotland (figure 1), and how it ‘confirmed’ to James Hutton that the earth must be very old. In common with virtually all uniformitarians who use this ‘evidence’, Bjornerud does not show even a glimmer of skepticism in the premise that the erosion needed to create an unconformity requires vast amounts of time to happen.

Bjornerud’s treatment of isotopic dating is no better. She admits (p. 49)

that different minerals from the same rock commonly yield different dates, but assures us, after the fact, that this is “expected” because different minerals have different closure temperatures. This is the special pleading inherent in uniformitarian dating methods: Isotopic dating is valid because its results are consistent, while at the same time inconsistencies are ‘expected’. Heads I win, tails you lose. She also (p. 54) presents the $^{40}\text{Ar}/^{39}\text{Ar}$ plateau as proof of closed system over time. It is not. Results showing a plateau can be obviously incorrect, and must be explained away.²

The author brings up plate tectonics as proof of the validity of the standard uniformitarian geologic age system. In doing so, she appears to be blissfully unaware of creationist work on catastrophic plate tectonics. The prominence of catastrophic plate tectonics in creationist literature and on creationist websites makes her ignorance of this fact all the more inexcusable. (My saying this does not imply support for catastrophic plate tectonics. I favour the use of multiple working hypotheses by creationists, and this includes the development of models that allow for static continents as well as those that allow for moving continents.)

Scorning creationists and running away from the evidence of rapid metamorphism

The issue in question was summarized by Bjornerud³ in another publication as follows:

“A reservoir-flux systems model is used to explore the interplay among the hydrologic, metamorphic and deformational processes recorded in these rocks. The model suggests that the metamorphic ‘event’ may have been remarkably brief ($\ll 1$ My) and governed by subtle interactions among phenomena over a wide range of scales.”

Now all this is revolutionary because, according to standard uniformitarian dogma (which I well remember from both undergraduate and graduate school), it takes countless millions of years for metamorphic rocks to form. The possibility that any kind of metamorphism could rapidly occur, even given the constraints of the kind of slow mountain building that is assumed to unfold within the context of uniformitarianism, is startling.

Marcia Bjornerud is visibly upset that scientific creationists have located her work, and dismisses these scholars with these patronizing words:

“We used some theoretical constraints to suggest that in this case, the spotty metamorphism might have happened in thousands or tens of thousands of years, rather than the hundreds of thousands to millions of years in more typical tectonic settings. This ‘evidence for rapid metamorphism’ is what someone at the Institute for Creation Research grabbed onto and cited—completely ignoring the fact that the rocks are known to be about a billion years old and that the Caledonides were formed around 400 million years ago. I was stunned to realize that there are people with enough time, training, and motivation to be trawling the vast waters of the scientific literature for such finds, and that someone is probably paying them to do it. The stakes must be very high. For those who deliberately confuse the public with falsified accounts of natural history, colluding with powerful religious syndicates to promote doctrine that serves their own coffers or political agendas, my Midwestern niceness reaches its limit” (pp. 10–11).

Oh dear! How *dare* any intelligent person think differently from the uniformitarian! Note also that Bjornerud does not point to any error in the creationist use of her work (and

fails to mention that the author of the piece in question is just as well qualified in geology⁴). All she can do is try to confuse the issue by bringing up the inferred great age of the rocks (an issue entirely separate from rapid metamorphism) and then get all emotional about what she imagines to be the malevolence of creationist scholars.

A pathological prejudice against independent thinkers

The author’s aversion to creationist scholarship goes even deeper. It borders on hysteria. She confesses:

“My colleagues and I despair at the existence of atrocities like Kentucky’s Creation Museum, and the disheartening frequency with which young earth websites appear when students search for information about, say, isotopic dating” (p. 9).

Someone who has survived a massacre will no doubt be offended by Bjornerud’s usage of ‘atrocities’, regardless of how he or she feels about creationism.

Some old chestnuts

There is nothing new under the sun, and this is especially true of anti-creationists. Author Marcia Bjornerud dusts off the old Haldane argument that the discovery of a Precambrian rabbit would falsify the evolutionary-uniformitarian timescale. It would



Figure 1. The endlessly quoted unconformity at Siccar Point, Scotland—a perennial but unproven argument for an old earth.

not. The Class Mammalia would be redefined as a polyphyletic group, with some mammals arising in the Precambrian and the rest in the early Mesozoic.

She also re-exhumes Dobzhansky's self-serving wisecrack that "Nothing in biology makes sense except in the light of evolution." Tell that to Linnaeus, who, while disbelieving evolution and accepting Special Creation, invented the system of classification still used by biologists today. Then tell it to evolution-disbeliever and creationist Gregor Mendel, who discovered the laws of genetics. And so on.

We are, once again, assured that Genesis makes God out to be a deceiver. Either that, or Genesis is an 'offensive dumbing down' (to whom?) of the Creation. Then again, this only goes on to show the abject shallowness and rigidity in the thinking of this author.

Conclusion

This book has very little new to offer. It is a rehash of old evolutionistic and uniformitarian shibboleths, with little evidence of any kind of substantial understanding of the creationist position. The author's undisguised hostility to creationist usage of her scientific findings alone discredits her as a serious author.

References

1. Webber, K. *et al.*, Cooling rates and crystallization dynamics of shallow level pegmatite-aplite dikes, San Diego County, California, *American Mineralogist* **84**:708–717, 1999. (The page range to this reference as listed in her book, on p. 199, at pp. 718–717, is evidently a typo.)
2. Woodmorappe, J., *The Mythology of Modern Dating Methods*, Institute for Creation Research, El Cajon, CA, 1999.
3. Bjornerud, M., Fluid-triggered, rheologically buffered eclogite metamorphism, Bergen Arcs, western Norway, *Abstracts With Programs—Geological Society of America* **33**(6):51, 2001.
4. The paper concerned was evidently Snelling, A.A., Confirmation of rapid metamorphism of rocks, *Impact* **392**, February 2006.