

Refutation of article by David F. Coppedge on the website *Creation/Evolution Headlines* - "Assumptions Distort Geological Dating" - on July 17, 2023.

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There are many erroneous statements in an article titled **"Assumptions Distort Geologic Dating"** (<https://crev.info/author/cehadmindc/>) by David Coppedge that needs to be refuted. First, among them is the following comment.

"Sedimentary Processes and the Temporal Resolution of Sedimentary Strata (*Geophysical Research Letters*, 6 July 2023). The Plain Language Summary of this research letter indicates that *uniformitarianism* is still often used to interpret rocks. Uniformitarianism stems from Charles Lyell's doctrine in the 19th century that 'the present is the key to the past'—i.e., present rates should be used to infer past rates. This principle was also fundamental to Charles Darwin's thinking about the rate of evolutionary change in biology: the effect of the slow accumulation of small changes over time."

That is a true statement, but the principles of uniformitarianism were proposed by Charles Lyell in the mid-1800s and is now only applied where careful geologic studies show that slow processes are in effect. Of course, there are many places where catastrophic rapid deposition can occur as during the explosion of Mt. St. Helens in 1980, but not everywhere is rapid deposition demonstrated as young-Earth creationists want to believe about how Noah's flood deposited great thicknesses of sedimentary layers in one year.

Coppedge also says:

“... that the ‘simplifying assumption’ of uniformitarianism (steady deposition) can bias interpretation, and does so most significantly when sediments are widespread. It should be noted at this point that many of the layers in the Grand Canyon are widespread across the continental United States, and some of the ‘megasequences’ of rock strata continue onto other continents.”

That is also a true statement, but the “megasequences” have sources where the sediment in these megasequences came from which have logical geologic explanations that make their coming from Noah's flood unnecessary. See these two links that explain where these sources are.

Analysis of article “Grand Canyon Carved by Flood Runoff” by Tim Clarey [Nr48Facts.pdf \(csun.edu\)](#)

Book: Carved in Stone - Dr. Timothy Clarey An Old-Earth Response Reviewed by Stephen Mitchell Mar 8, 2021
[Carved-in-Stone-Response.pdf \(jesusinhistoryandscience.com\)](#)

Second, it has been pointed out by young-Earth creationists that layered clay in shale can be quickly flocculated in a flume (O'Brien and Slatt, 1990), and they have used this experimental study to justify saying that shale layers can be deposited quickly during Noah's flood. But the flume has adjacent nearby walls that make that quick-layered-deposition possible. However, the Cretaceous Mancos Shale (**Figure 1**) that is more than 3,000 feet thick in Colorado had no adjacent walls, and this formation can be traced laterally into formations that have stream-deposited sands that came from the ancient Appalachian Mountains that were once 12,000 to 15,000 feet high.



Figure 1. Cretaceous Mancos Shale in Colorado.

The erosion of these mountains that provided the clay to the Mancos Shale as well as the sands in the stream-deposited sandstone formations extending to the Mancos Shale formation took millions of years to occur. Stream waters draining from these mountains carried the clay and sand sediment almost 3,000 miles across the continent to Colorado and were not deposited there during Noah's flood. Moreover, on top of the Mancos Shale is a sandstone formation that has river channels (**Figure 1**) with petrified tree logs in them that would not have been deposited by Noah's flood waters whose supposed rapid movements would have scattered the logs instead of confining them in channels.

Third, Coppedge says:

“Flood geologists, take note! These secular authors do not question Deep Time, but they have exposed assumptions that underlie the consensus belief in millions and billions of years. There is no reason scientifically or empirically to conclude Deep Time if unique conditions in a global catastrophe were responsible for sediments and fossils as we observe them.

The Genesis Flood involved rapid onset, heavy sediment loads, oscillations in speed and intensity throughout the flood year, rises and drops in sea level, and ‘billions of dead things buried in rock layers laid down by water all over the earth’ as Ken Ham quips.”

But Coppedge does not realize that there are no rapid movements of heavy sediment loads in global catastrophic

tsunamis or hurricane storm waves. Motions of water in hurricane storms or tsunamis are strictly circular and have no erosion power to produce sedimentary particles and then transport these particles long distances as far as the Grand Canyon (**Figure 2**). Nor does he explain where all these enormous quantities of ready-made particles of clay minerals, quartz sand, and crystals of calcium carbonate come from. His claim that such happens during Noah's flood is totally pseudoscience with no merit.

Waves –circular motion

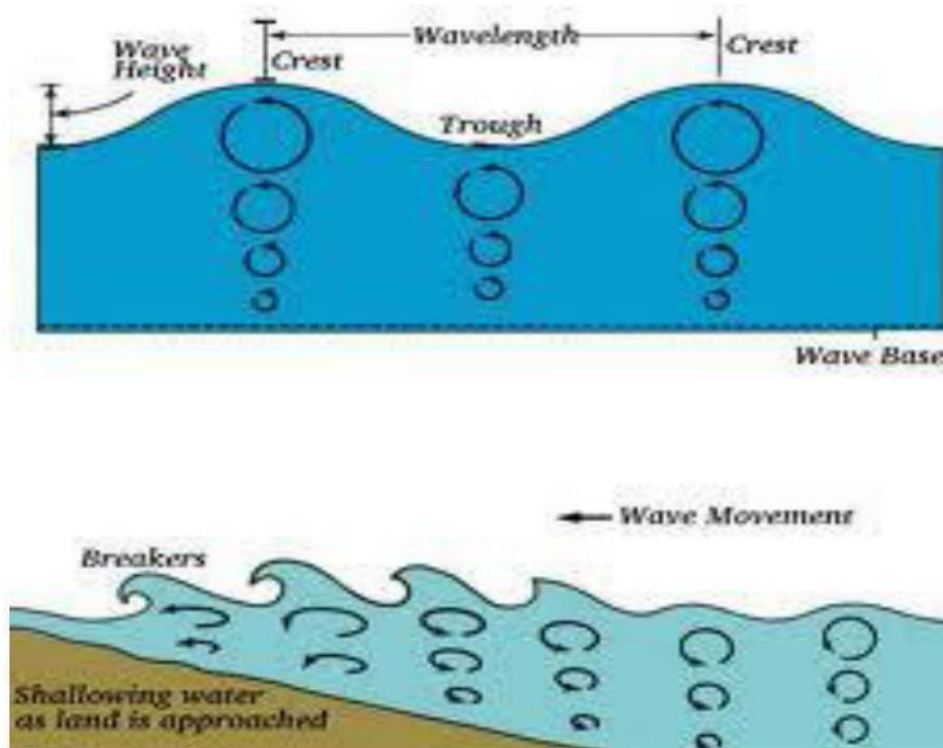


Figure 2. Circular motion of waves in hurricanes or tsunamis.

Fourth, he says:

“Additional factors include, but are not limited to drastic folds in rock layers indicating the sediments were soft and unconsolidated when distorted.”

But the folds in rock layers were not created when the rock layers were soft and unconsolidated but were solid and well cemented, as shown by evidence in this link.

Critical Analysis of Snelling’s Model for the Folding and Origin of the Tapeats Sandstone, Grand Canyon, Arizona, and Postscript [Nr80Tapeats.pdf \(csun.edu\)](http://Nr80Tapeats.pdf(csun.edu))

Fifth, Coppedge points out:

“...that there are flat contacts where old-Earth geologists assume gaps of many millions of years transpired, suggesting immediate deposition of the next formation.”

That is true, but he neglects to point out to you that in the Grand Canyon there are several places that are not “flat contacts” but reveal times in which sedimentary layers were raised up out of the ocean and eroded by streams to carve deep canyons. See this example in **Figure 3**.

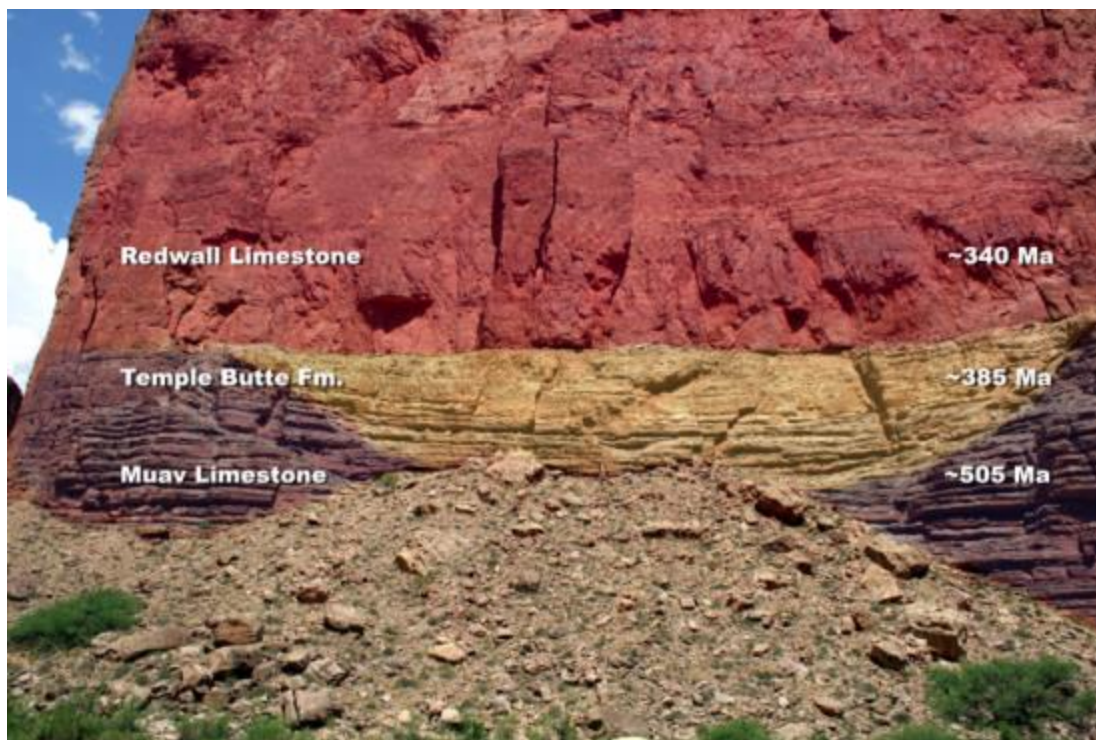


Figure 3. Deep canyon (more than 100 feet deep) cut in the Muav Limestone that is now filled with the Temple Butte Formation below the Redwall Limestone.

Also, the Redwall Limestone has caves and sinkholes in karst topography when it was raised out of the ocean to allow rain water to dissolve out calcium carbonate in the limestone to make the caves and sinkholes. During Noah's flood sedimentary layers were supposed to have been deposited quickly in one year all under water and at no time would any of these layers be above the ocean level.

Sixth, Coppedge says:

"... large boulders above the Great Unconformity were transported long distances."

That is true and is explained in the same link as indicated above about the Tapeats Sandstone. [Nr80Tapeats.pdf \(csun.edu\)](#)

Seventh, Coppedge says:

“...fossil graveyards showing mixtures of marine and terrestrial organisms jumbled together, without bioturbation.”

That is also true because there are local places where erosion has mixed marine and terrestrial organisms jumbled together because of local storm erosion that created that jumbling. He neglects to tell you that although there are many places where sedimentary layers were deposited with mixed fossils, in most other places there are examples of fossils of marine animals that were growing on top of each other undisturbed as in the Capitol Reef formation in New Mexico that is more than 100 feet thick with fore-reef and a back-reef deposits that could not have been created during the one-year of Noah's flood with that thickness (**Figure 4**).

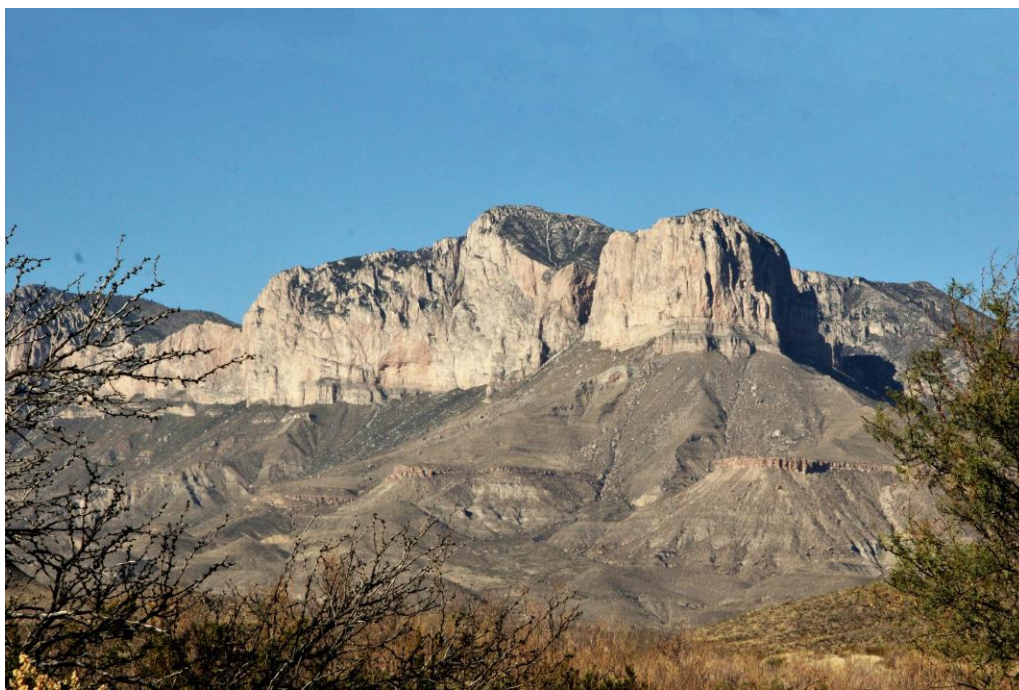


Figure 4. Capitan Reef formation, Guadalupe National Park, New Mexico. Photo courtesy of Steven Mitchell.

Coppedge also says that

“Darwinian evolution falls because Darwin needs those precious billions of years in which to hide his magical thinking,”

And he recommends:

“Terry Mortenson’s book *The Great Turning Point* that recounts the history of geology in the late 18th and early 19th centuries, exposing the point when the uniformitarians took over geology to “rid science of Moses.”

He says that:

“Mortenson gives biographies of reputable flood geologists who incorporated the global flood into their interpretations of the fossil and rock records.”

Finally, eighth, contrary to Coppedge’s opinion about the failure of evolutionary theory, there is ample evidence that Darwin in his time had evolutionary theory wrong, but he made a good start. Since his time, modern biologists know of at least 15 ways beyond the two suggested by Darwin as to how evolution of life occurs by slow and gradual changes that led “from molecules-to-man evolution.” See these two links for further explanation of the theory of evolution and how it is well supported by the fossil record in the geologic column.

Grand Apologetics – Errors in Science and Christian Guidance [Nr93Grand.pdf \(csun.edu\)](#)

Position Statement: Science, Bible, Noah's Flood, and Evolution [Nr102Position.pdf \(csun.edu\)](#)

Conclusion

Coppedge and other young-Earth creationists choose data that fit what they want to believe and ignore data that do not fit their beliefs. That is not the way proper science is done. Unfortunately, their readers and listeners will swallow what they promote because what they say sounds so convincing when it is not truth but pseudoscience.

References

O'Brien, N. R, and Slatt, R. M, 1990, Formation of Shale by Compaction of Flocculated Clay – A Model. In: Argillaceous Rock Atlas, Springer, New York, NY, Chapter 7. https://doi.org/10.1007/978-1-4612-3422-7_7