

## Analysis of article “Grand Canyon Carved by Flood Runoff” by Tim Clarey

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Tim Clarey, a research associate at the Institute of Creation Research, has written an article titled: “*Grand Canyon Carved by Flood Runoff*” that was published in the journal *Acts & Facts*, vol. 17 (12) December, 2018, p. 10-13. Below is an analysis of this article.

Clarey correctly states that scientists do not agree on how and when Grand Canyon was carved and that some creation scientists thought that huge post Flood lakes burst and carved the Grand Canyon, but he points out that the evidence for these lakes is weak to nonexistent. He then proposes that the Grand Canyon was formed during the run-off phase of the Flood as water rapidly drained west off the Colorado Plateau.

He argues by ridicule against the models in the book “**The Grand Canyon, Monument to an Ancient Earth: Can Noah’s Flood Explain the Grand Canyon?**”<sup>1</sup> He suggests that the using of either stream capture or drainage through the collapse of limestone by karst erosion is “too tricky.”

He says that the majority of secular scientists assume that the Grand Canyon was carved by a large river in less than 6 million years and gives reference to the authors of the above book. But eight of the eleven authors of this book are Christians, as I am, and only a minority is secular scientists. So, his statement is not true. Moreover, he specifically cites Helble and Hill’s chapter in this book, both of whom are outspoken Christians, so the deceit of identifying them as secular scientists is even worse.

He supports a model by Mike Oard<sup>2</sup> who suggested that the Grand Canyon formed during the latter part of the runoff phase of the Flood. This formation supposedly occurred after catastrophic plate motion ceased in the Flood year and before the thickened areas of continental crust would have begun to rise due to

isostatic adjustment. Oard suggested that initially the Flood waters drained to the east but then shifted to the west to carve the Grand Canyon.

Clarey suggests that uplifting of the soft sediment in the Colorado Plateau caused cracking in the Kaibab limestone and underlying sandstones so that the Colorado River took the easiest downhill direction through these cracks toward the west. He suggests that “rapid uplift, cracking, and surface drainage of receding flood waters provide both the path and necessary volume to quickly carve out Grand Canyon. This was accomplished before the Ice Age during the receding phase of the Flood and not during or after the Ice Age.”

The problems with Clarey’s model are that he chooses data that he believes fit his model and ignores data that do not fit. His problems include the following six observations.

- (1) In the first place, Clarey makes a false assumption that all sedimentary rocks in the Grand Canyon were deposited in the Flood, when scientific evidence clearly indicates that the Flood was not global in extent. See: <http://www.csun.edu/~vcgeo005/Nr38Reasons.pdf>, <http://www.csun.edu/~vcgeo005/Nr42Response.pdf>, and <http://www.csun.edu/~vcgeo005/Nr45Biological.pdf>. (However, there is good evidence that supports a local flood. See: <http://www.csun.edu/~vcgeo005/Flood2.html>.) On the basis of Clarey’s false assumption, he cannot even begin to suggest that the Flood carved the Grand Canyon when the sedimentary rocks were not even deposited by the Flood prior to its erosion.
- (2) There is no evidence that catastrophic plate motion occurred during the Flood year. Ample scientific evidence indicates that the plate motion required millions of years. See: <http://www.csun.edu/~vcgeo005/Collins5.pdf>.
- (3) Clarey ignores the fact that the thick Triassic, Jurassic, and Cretaceous sedimentary layers of the Grand Staircase north of Grand Canyon (totaling more than 3,000 feet), which creationists say were deposited during the Flood year<sup>1</sup>, once covered the Kaibab Limestone. He does not explain where all this sediment went or how the carving of the Grand Canyon could remove all these overlying layers when there is no

- evidence that Flood waters were the cause of their removal. Moreover, the great thicknesses of these layers would have protected the underlying Kaibab Limestone and lower limestone and sandstone layers from cracking.
- (4) Clarey does not explain how the Flood waters can erode 100 feet down into the Zoroaster granite at the bottom of the Grand Canyon in one year (or even 4,350 years) when granite erosion only occurs at thousandths of an inch per year. See Figure 11 in:  
<http://www.csun.edu/~vcgeo005/Nr46Genflood.pdf>.
- (5) Clarey indicates that lake sediment north of the Grand Canyon has been cut by igneous intrusions that are dated by secular geologists as being between six and sixteen million years old.<sup>1</sup> He says that he disagrees with these dates and the dating methods, but then says that these dates imply an age older than the Ice Age, which precludes this lake being a post-Flood source of water that carved the Grand Canyon. But this statement negates what he claims above where he supports Michael Oard's model, saying that the carving occurred "during the receding phase of the Flood and not during or after the Ice Age." Such a claim makes this lake and igneous intrusions older than the Ice Age, which is supposedly Clarey's belief and does not preclude this lake being a post-Flood source of water. However, he does point out that drainage of such a lake could not have carved the Grand Canyon.
- (6) There are no igneous intrusions that cut the sedimentary layers exposed in the Grand Canyon, but at least thirteen times during the Pleistocene Epoch basalt lava flowed into the inner gorge of the Grand Canyon and formed lava dams, as high as 600 meters, that temporarily blocked the flow of the Colorado River.<sup>3</sup> Geologic evidence shows that such dams were created several different times and that each dam was eroded out before subsequent dams were created and eroded out. Even though the emplacement of these basalt lavas was during the Ice Age and is much later than when Clarey says the Flood occurred, the erosion and destruction of solidified hard basalt in many different dams cannot possibly happen in 4,500 years since the Flood, regardless of whether Clarey doubts the Pleistocene age measurements made by secular scientists. Therefore, Clarey's age date of about 4,500 years for the

Flood is incorrect and the carving of the Grand Canyon cannot have been in just a short time.

## References

<sup>1</sup>Carol Hill, Gregg Davidson, Tim Helble, et al. (eds), 2016, **The Grand Canyon – Monument to an Ancient Earth: Can Noah’s Flood Explain the Grand Canyon?** Grand Rapids, MI, Kregel Publications.

<sup>2</sup>Oard, M. I., 2014, **A Grand Origin for Grand Canyon**, Chino, AZ, Creation Research Society.

<sup>3</sup>Dalrymple, G. B. and Hamblin, W. K., 1998, **K-Ar ages of Pleistocene lava dams in the Grand Canyon in Arizona**, *Proceedings of the National Academy of Sciences USA*, August 18, vol. 95(17), p. 9744-9749.