

**Creation Science Exposed –
Coconino Sandstone
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Most young earth creationists point to the [Grand Canyon](#) as a product of Noah's Flood. As you also know, geologists have long contended that the canyon formed over millions of years. But, the young earth creationist has another problem. The layers of rock in the Grand Canyon must also be explained as being deposited by the Flood.

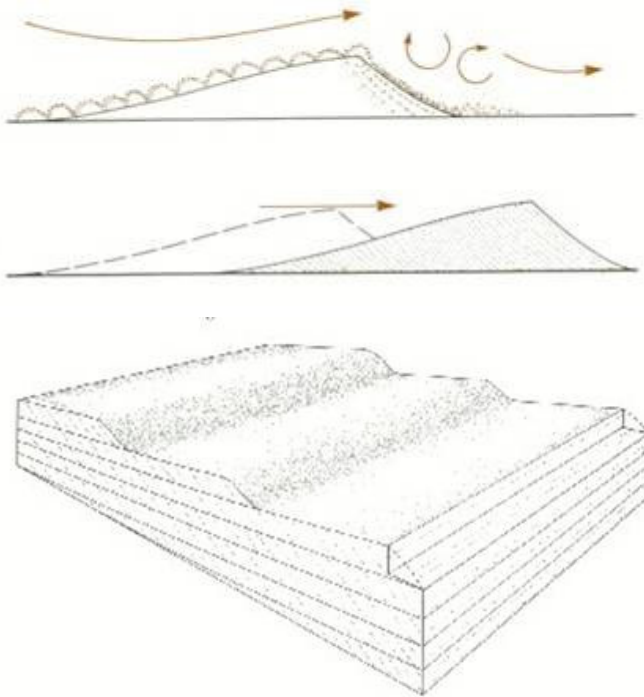
Two young earth creation science proponents, [Andrew Snelling](#) and [Steve Austin](#), have proposed that proof of [Noah's Flood](#) can be seen in the strata in the Grand Canyon know as the Coconino Sandstone ([click here for their article](#)). Let's look at the model they propose for how this sand was deposited. Although this is a sandstone formed from a desert, for their sake, lets assume they are correct that the sand was deposited from an aquatic event, and not from a dry, desert environment.

They propose that the volume of sand deposited in this formation, which is roughly 315 feet thick and covers an area of 200,000 square miles (or 447 miles long and 447 miles wide) is about 10,000 cubic miles by their estimates (using these same numbers they give yields a volume of 11,931 cubic miles). They claim that the sand was brought in from the north, over the period of **several days**, by ocean currents, which, in their own words, *"The maximum current velocity would have been almost 5.5 feet per second (165 cm or 1.65 metres per second) or 3.75 miles per hour. Beyond that velocity experimental and observational evidence has shown that flat sand beds only would be formed."* And, in the next paragraph, *"Now to have transported in such deep water the volume of sand that now makes up the Coconino Sandstone these current velocities would have to have been sustained in the one direction perhaps for days."* **Please note, they propose the formation of this 315 foot thick sandstone in only a few days.**

I actually had to lift my jaw off the floor when I read this. Are they actually proposing that they can move 11,931 cubic miles of sand an average distance of 223.5 miles (assuming the sand started at the northern boundary of the current formation, and if the bed is 447 miles wide, the average would be half that) with a water current of only 5.5 feet per second? What they are proposing is similar to this...take the top 315 feet of the entire state of New Mexico, run water over it, and in a week, it will be in Texas!

There are numerous problems with this creation science theory. First, how do you erode the material at that speed? The material for the sandstone has to be eroded from it's present position, and transported hundreds of miles. The erosion rate would be so slow that you probably would only end up eroding a handful of sand from bedrock in a few days. Even if the sand was just lying there, ready to be moved, it would still fall far short of being able to move that much sand. Why? They cannot exceed 5.5 feet per second, or else they won't get the cross-bedding that is evident in the Coconino Sandstone.

Figure 6.10 Cross-bedding is formed by the migration of ripple marks, sand waves, and dunes. Particles of sediment, carried by currents, travel up and over the sand wave and are deposited on the steep downcurrent face to form inclined layers.



The figure shows the process. Some sand would be carried suspended in the water, but most would creep along the ocean floor. Sand particles are pushed along the bottom, up over the ridge, and fall on the steep side of the sand wave. This process happens over and over, until the sand wave advances slowly (bottom figure). With the Coconino Sandstone, this happens over and over, as layer upon layer deposits upon each other (lower figure). Considering the first, lowest deposited layer...at the proposed current velocity, it would take over 5 days just for the water to reach the other side and deposit this sand. Then you allow the subsequent layers to deposit, and, if you even believe their model, you get many weeks of sand deposition. The thickest crossbeds in the Coconino are about 30 feet. Even assuming all beds were equal, at 315 feet thickness, that's more than 10 layers. You can't do this process in a matter of a few "days" as the authors suggest!

The author's are actually proposing that a 30 foot tall sand wave can be moved over 400 miles in less than a week, with a current of only 5.5 feet per second. In a matter of a few days, a single sand wave, under ideal conditions, would be lucky if it were to manage a move of greater than one mile...400 miles isn't possible. And they have to move at least 10 of these sand waves!

Imagine this...at mile marker 0, the water starts moving. The first water current carries thousands of grains over the edge of the sand wave, and continues going, leaving the advancing sand wave far behind, until that first current is 5 days away, or 400 miles away...but the sand wave is 399 miles behind, as it slowly advances. In a few days (which the authors propose) you probably can't get even one 30-foot wave of sand to move more than a mile! And somehow, the authors expect the average reader to believe this model!!!

Second, it is obvious that young earth creation science advocates come up with these theories, and they are posted to the web or published, and they don't consider the impact to each other's theories. In an article by John Baumgardner and Daniel Barnette, ["Patterns of Ocean Circulation Over the Continents During Noah's Flood,"](#) these creation scientists have developed a model for creating ocean circulation to cause the erosion needed to deposit all these layers of rock, and they say that the ocean currents top out at 87 meters per second over the continental land masses. These currents are localized in gyres, and compressed towards the western margin of the continents.

If the current is too great, the sand particles stay in suspension, carried along by the current, until the velocity drops and the sand falls to the bottom. With the Baumgardner/Barnette study, these currents would carry the sand away from the continental masses, and deposit it in the deep ocean basins. In other words, we would

never see the sand today, as it would be deeply buried.

The model does not account for this pattern of ocean circulation. If you accept the Baumgardner and Barnette theory, then you eliminate the theory of the floating forests being used to make the coal deposits we see today! ([see my article on this](#)). We are at least proving one erosion theory...if you closely examine young earth theories, they erode!

Third, a rate of 5.5 feet per second equates to 3.75 miles per hour (about as fast as you can walk). Remember, the authors' state that the sand moved into place in a **few days**. Since the formation is 447 miles across, at 3.75 miles per hour, it would take the water itself 119.2 hours (about 5 days) to reach the other end of this sand formation. How is water at this rate going to deposit sand 447 miles away in "a few days," when after only five days the water itself barely reaches the other side?

The authors conclude "Consequently, this enormous volume of sand would have to have been transported a considerable distance, perhaps at least 200 or 300 miles (320 or 480 kilometres). At the current velocities envisaged sand could be transported that distance in a matter of a few days!" How can they conclude this!!! In a matter of a few days they can barely get the water there, much less move the sand too!!!

Even if this was feasible, what about the other 16 layers of sedimentary rock? Look at the cutaway on the Answers in Genesis article, showing the layers of rock in the Grand Canyon. The Flood model must deposit those as well! Let's even consider the tilted layers beneath the canyon. By young earth creation science models, these must have formed, then the catastrophic plate tectonic events took place, uplifting them, and then the rest were deposited. This opens up many other problems that we need not consider here. Just be aware they cannot be explained by young earth theory.

I will say this though...for the first 40 days of the Flood, it rained. The water was on the earth a total of 375 days. There are seventeen strata shown in the Grand Canyon diagram, and they must be deposited in 375 days. In other words, they must average 22 days of deposition per layer! In order to prove this, their model must account for this, and not just the isolated example they try to give for the Coconino Sandstone (in reality, it must also account for another 10,000+ feet of sediment in layers stratigraphically above the canyon...for more on this, see [Stratigraphy](#)). They know they cannot prove this, so they try to trick the reader into believing a small portion, in the hopes that the reader will "assume" the rest!

Conclusion

The proposed young earth creationism model to explain the deposition of the Coconino Sandstone during the short time of Noah's Flood completely erodes away when you examine it closely. And, if you accept the theory as fact, then you deny the erosion rates proposed by other creation scientists to create the material needed to deposit the sandstone. In other words, you can't "have your cake and eat it too." Part of the title of their article is "Startling Evidence for Noah's Flood." The only thing startling about it is how fast it fails when a little common sense is applied.