SCIENCE 2 DOWNLOADS the Grand Canyon Strata

Grand Canyon: Exposing the Flood

https://www.icr.org/article/grand-canyon-exposing-the-flood

WEDNESDAY, DECEMBER 30, 2020

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article highlights

- When you travel to see Grand Canyon, you'll likely be told it took millions of years to form—but there's a far better and more scientific explanation for the huge canyon's existence.
- Massive water erosion carved Grand Canyon in a short time and revealed pancake layers of sediment a mile deep.
- Only an event like the Genesis Flood could have laid down these vast, flat sedimentary layers, and evidence indicates that the Flood's runoff carved this great canyon through them.

Grand Canyon carves a 277-mile-long chasm through northwestern Arizona. Running from Lee's Ferry to Lake Mead, the expansive landscape reveals some of the most colorful geology in the world and provides strong evidence for the global Flood.

Lateral Extent of Strata

As you look across Grand Canyon, observe the layers on both walls. The cliffs and the colors match from one side to the other. The gaps between the cliffs were once filled solid, the layers continuous, but the space in between has since been removed by erosion. The bottom flat layers are older and were deposited first; these are called Cambrian system rocks. The youngest layers are on the canyon's rim; these are identified as Permian system rocks.

An explorer carefully navigates a canyon wall trail, circa 1930

Image credit: Henry G. Peabody Photographs, Greater Arizona Collection, Arizona State University Library, Tempe, AZ.

All of these layers were deposited during the rising phase of the global Flood. Powerful tsunami-like waves spread massive, continuous sedimentary layers for hundreds of miles in all directions across this part of North America. Even relatively thin layers extend across Grand Canyon.

Flat Contacts Show Little Time Between Layers

Grand Canyon's layers are like stacked pancakes. The lowermost flat layer at Grand Canyon is called the Tapeats Sandstone. At about 200 feet thick, it makes a thin, dark brown layer from a distant view. This layer represents the first extensive Flood deposit at this location. The basal boundary of the Tapeats is a special type of unconformity[1] called a *nonconformity*, where sedimentary rock resides on top of pre-Flood crystalline rock. This surface is also referred to as the Great Unconformity (Figure 1).

Figure 1. *ICR geologist Dr. Tim Clarey addresses a Grand Canyon tour group with the Great Unconformity behind him*
Image credit: Kevin Turley

This global phenomenon is found in countless locations where Cambrian system sedimentary layers overlie Precambrian crystalline rocks. Just below the contact, we observe metamorphic crystalline rocks that are oriented nearly vertically, but the overlying Cambrian Tapeats is horizontal. Although secular geologists claim the Precambrian rock surface here experienced over a billion years of erosion, the contact with the Tapeats is almost perfectly planar—it's flat! Where are the gullies and chasms from billions of years of erosion?

The Redwall Limestone is Grand Canyon's most prominent layer—a red, thick, vertical cliff that spans the middle of the exposed rock layers. It's part of the Mississippian system. Right below it, the Muav Limestone of the Cambrian system appears a bit more grayish. The evolutionary narrative claims 160 million years of erosion occurred between these two rock units. But where are the v-shaped channel patterns that gullies and canyons should have carved on top of the Muav? Instead, one flat limestone lies flat on another nearly everywhere you look.

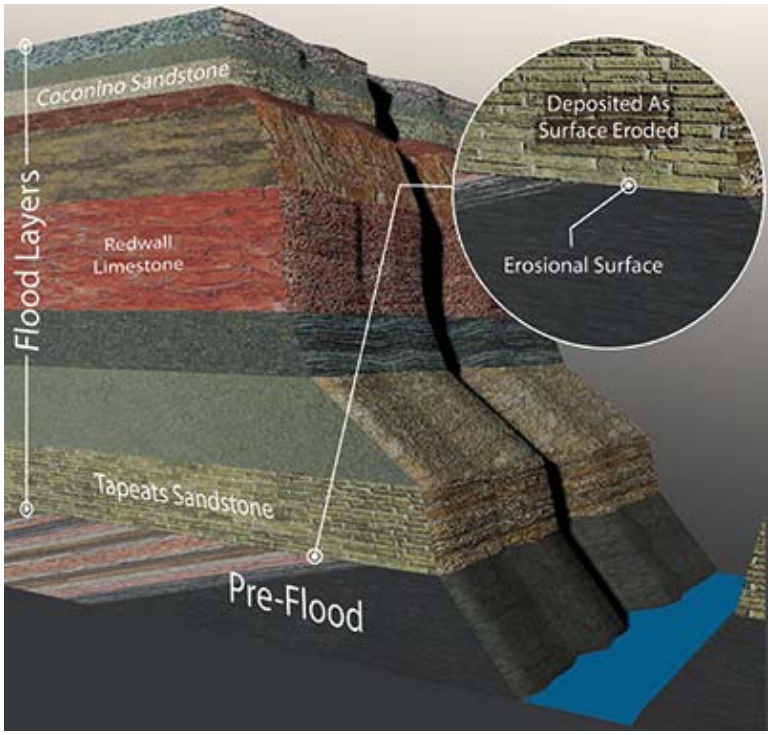

Figure 2. *Flat contact shows no erosion and thus no time between the deposition of the Muav Limestone (gray) and the overlying Redwall Limestone (red). The inset shows the Great Unconformity.*
Illustration by Scott Arledge

A third flat unconformity lies between the Coconino Sandstone and the Hermit Shale. If you look toward the top of the layers in the canyon, you'll see a thin, light, tan-colored cliff on top of a dark red layer. About a million years of erosion supposedly separates these two units (Figure 2). But if they were really deposited millions of years apart, valleys and canyons should be found between each of these layers. Instead, the contact is almost perfectly flat everywhere we see it.