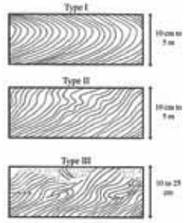
and how they occur. The drawing at the right is from Allen and Banks. These are three types of structures that can occur during the deposition of sand. Type I and II can be up to several meters high and this is what we found in the Coconino. All the researchers have concluded that features like these can only form during deposition in water. Type III is only found in wind deposited sand dunes. The biggest are about 1 inch tall. They are found in modern dunes and nobody has ever found any in the Coconino Formation.



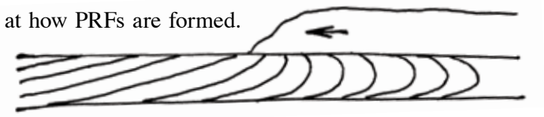
To understand why this is significant to Noah's Flood, we have to look at two geological processes involved in PRFs.

Liquefaction - When sediment is flowing in water, it is liquefied. There is water between the grains of sand, not just in the open pore space; no grain is directly touching any other grain. As the sediment is deposited, the water still keeps the grains from touching. See photo at right. If the sediment is bent, the grains slide past each other, maintaining smooth strata lines.

Evulsion - As the sediment gains depth, the weight of the sediment on top pushes down on the sediment below and squeezes the grains together, leaving water only in pore space between grains. The grains are in direct contact with each other. If you now bend the strata there will be crumbling and jointing. It will be obvious that the strata was folded ***after*** evulsion has occurred. In every single outcrop we found, evulsion had not yet taken place.

Once a sediment flow stops flowing and the sediment is at rest, evulsion of the lowest part of the newly deposited sediment happens quite quickly, even if the new sediment is only a few inches thick. When the sediment bed is 20 feet thick like the one at Lizard Head, evulsion of the lowest level occurs within a few minutes or less.

Now we need to look at how PRFs are formed. First a layer of cross-bedded sediment is laid down in a sediment flow.



Very soon afterward, another sediment flow comes across the top of the first flow. The friction between the top of the bottom flow and the bottom of the top flow grabs the top of the bottom flow and drags it along with the bottom of the second (top) flow, bending the crossbedded strata back over itself.

In every PRF we found, ***NO*** evulsion of the bottom of the bottom flow had occurred. Many of the PRFs we found are 3 feet tall or more (up to 20 feet!). Evulsion of the bottom of the bottom flow would occur nearly immediately in such a situation. We can conclude that the two flows occurred within a few minutes of each other.

The naturalists tell us that it took 250,000 years for 30 feet of the Coconino Formation to be deposited. Their belief requires it. But there is ZERO data/evidence to support that belief. The actual data shows that 30 feet of Coconino was deposited in well under one hour.

What does the research, using the scientific method, support? God, in the person of Jesus, brought the judgment of Noah's Flood on His creation because of man's evil, with the resulting beauty of the rocks of Sedona, rocks that cry out about the glory of God! CRM

Next Issue:
The Great Sedona Earthquake

Bear Mountain
In this location there is another bed of PRFs 30 feet below the one pictured. That helps support he idea that all the Coconino was deposited rapidly under water.

Dave Miller Trail (Pass)

Brins Ridge
Top photo shows Type II folding. The bottom photo is 100 feet to the north of the top photo in the same bed. This was the longest continuous bed of PRFs discovered. It runs for over 250 feet.

AGENDA: "But Guy," you say. "You have an agenda." That is correct. Everybody, including scientists, has an agenda. Mine is to show that the Bible is accurate in its claims regarding creation and Noah's Flood. As in this issue, I use solid scientific evidence to support my position. What about naturalists? The current geology paradigm has a foundation in the 3 volume book *Principles of Geology* by Charles Lyell (1830-1833). Some of what he wrote was excellent. But some of it was his imagination based on his AGENDA, which he indicated in several letters to friends. His agenda? "Remove Moses from geology." That is a quote from his letters. He worked to destroy logical geological interpretations of data that support the fact of Noah's Flood. Famous atheist-geologist Stephen Jay Gould, had this to say: "...Darwin had to use Lyell's most characteristic method of argument — he had to **reject literal appearance and common sense** for an underlying 'reality.' (Contrary to popular myths, Darwin and Lyell were not the heroes of true science, defending objectivity against the theological fantasies of such 'catastrophists' as Cuvier and Buckland. Catastrophists were as committed to science as any gradualist; in fact, they adopted the more 'objective' view that one should believe what one sees and not interpolate missing bits of a gradual record into a literal tale of rapid change.)" EVOLUTION'S ERRATIC PACE" NATURAL HISTORY (VOL. 86, MAY 1977) MAY 01, 1977 Lyell's agenda threw the scientific method out the window due to his hate of God and the Bible.

For nothing is hidden that shall not become evident, nor anything secret that shall not be known and come to light. Christ Jesus - Luke 8:17

Creation News Update

Proclaiming the TRUTH of the Bible starting at Genesis 1:1

Vol. 22, #3- Summer 2025 (#89)

Price: Free
Value: Eternal

But Jesus answered, "I tell you, if these (his followers) become silent, the stones will cry out!" Luke 19:40

We must speak for silence would shame us, and the rocks themselves would cry out... You, O Lord Christ Jesus, must be praised for who You are in the world You have made.

Hello! The latest science is full of new findings that show that God, in the person of Jesus, is Creator of the universe, you and us. Thank you for joining us in learning the Good News.

Guy & Cindy Forsythe

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Sedona Geology Series - Part 2

While researching the Coconino, some amazing discoveries were also made in the Schnebly Hill Formation (actually in several formations). Geological features never before mentioned in any papers or books, not even Sedona Through Time, *by Wayne Ranney, were discovered by the author. We continue to show that what you think about Sedona geology is mostly incorrect. We will continue to support that statement with photos, data and references to published papers in the field of geology. We're still having fun!*

Brins Ridge

Castle Rock

Introduction

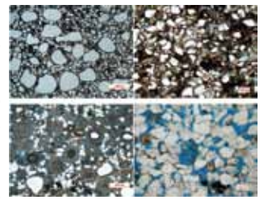
In 2010, while hiking on the Mushroom Trail (an unofficial trail not maintained by the Forest Service) I discovered features in the Coconino that are impossible to occur unless the Coconino was deposited rapidly in water. On the way up that same trail, is evidence of an earthquake in the Sedona area. This is the second issue where I explain my findings. Hopefully you will continue enjoying the journey as much as I have. Sedona is home to some unique, beautiful and telling geology.

Review

Was the Coconino Formation deposited rapidly in water or slowly by wind? There are many lines of evidence in the Coconino Sandstone. Last issue, we looked at several:

1 - Crossbed Dip. Unlike most strata, the strata of the Coconino was laid down at an angle. Naturalists have used this angled deposition as one of the primary arguments for the Coconino being originally deposited as sand dunes by wind. We discovered that there is a lot of myth regarding the angle and it better supports underwater sand waves. Because the only researchers we found who have investigated BOTH say it is hard to tell them apart based on dip angle, we called it a tie.

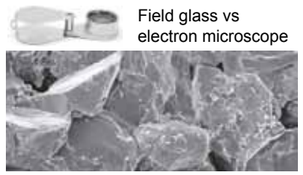
2 - Sorting. Naturalists claim the Coconino is well-sorted. Wind sorts sand as it picks it up (picking up small grains first and larger grains as the wind speed increases) and then depositing the different sizes in layers when the wind dies down. The Coconino is poorly sorted. This is strictly a characteristic of water deposition (photo at right).



3 - Well Rounded. When viewed through a field glass, which has low magnification, the grains appear to be well rounded. But at larger magnification it is discovered they are sub angular to sub-rounded. This favors water

Next Page

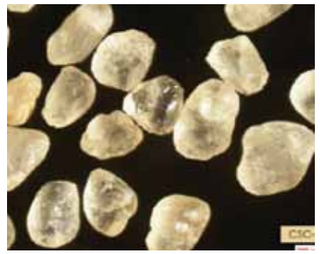
transport and never any air transport. Air transport would round-off the grains as they collide into each other thousands of times in transport. Water acts as a lubricant. The grains would not round themselves.



On to more lines of evidence...

Frosting

In addition to the crossbed dip myth, a major argument used for wind deposition of the Coconino is frosting. The glass in the photo at the right has been frosted. The smooth flat surface of the glass has been pitted so the glass becomes translucent. The area not frosted spells out letters. Frosting can be done in two ways. One is exposing the surface to acid. The other is by sandblasting: shooting sand grains at the glass under relatively high pressure to give the grains of sand sufficient speed (and therefore inertia) to chip and scratch the glass.



Some of the Coconino is indeed frosted. But look at the Coconino frosting in the photo to the right. You do not see distinct scratches and angular pits. The frosting is "softer." This is the result of exposure to acid. Which means the frosting occurred in a water environment, not a desert environment. In addition, the Coconino sand grains are small, too small to have enough inertia to scratch and pit each other. The frosting is actually the result of acid exposure during water transport.

We must add that the 2 facts that make the Coconino look like it might be frosted from wind action when viewed under a low resolution field glass: **1** - The Coconino is sub-angular, giving it faceted surfaces which scatters the light. **2** - One sees the larger grains through a field glass, but not the MANY smaller grains that surround it and give it a more-frosted appearance.

Raindrops

To the left is a slab of Coconino which has what the naturalists call raindrops. Of course, raindrops could not make an impression if the sand is under water. Below that photo is a photo of raindrop impressions taken in sand just after a rain.

There is a big difference. The known raindrops simply make a mottled, random arrangement of pits in the sand. The raindrops in the Coconino are quite different. They are in rows. There is distance between individual drops. They make an impression up to 1/2" deep. In other words, they are not raindrops.

We are not sure what they are. Nobody has published a study of "raindrops." We suspect that they are actually gas bubbles that got trapped in the drying sand. One thing is for sure, they are not evidence that the Coconino was deposited by air.

Vertebrate Tracks

Vertebrate tracks are found in several locations in the Coconino. The photo, top of next column, is of tracks in Marble Canyon just above the Colorado River. Naturalists claim that the tracks were made when creatures walked up a sand dune after a heavy dew the night before (how are the tracks preserved?). Leonard Brand's research on the tracks has been published several times in leading geology journals.

There are several things to note. The tracks, with only ONE exception, go up hill, not across or down. The tracks suddenly appear in a slab of rock and then they are gone again in that same slab... As if something (say water) dropped them on the bottom as the water got less deep, they walked up hill to get above water, and then were lifted again as the water increased in depth. For many of the tracks, they are angled from straight up. The red arrow indicates straight up the rock and the yellow arrow indicates that the track-ways go at an angle. But, in most cases, the footprints face straight up hill, but move up and to the side. The critter is being pushed from the side, say by the flow of water. Critter tracks support water deposition of the Coconino.

The Rest of the Items Have Never Been Reported in Studies of the Coconino (Before our research)

Dolomite

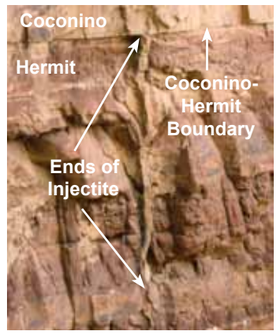
Dolomite is only known to form under water. In fact, there is no way to explain dolomite formation outside of water formation.

The white arrows in the far right photo show layers of dolomite within the Coconino. The map shows the area over which dolomite layers are found in the Coconino, usually near the bottom of the formation. In addition, dolomite ooids are found in the Coconino. Ooids are small (usually less than 1/8th inch) nearly spherical balls of material. The presence of dolomite indicates that the Coconino was deposited underwater.

Clasts

A clast is a large rock. A massive bed is a bed of rock that shows no strata lines. In the photo to the left is a large rock (about two feet wide) in a massive bed in the Coconino. Wind simply cannot move a rock that large. Only water can move a big rock.

Hermit Cracks Filled with Coconino



Bright Angel Trail follows along the Bright Angel fault. Along the trail are several large cracks in the Hermit formation which lies just below the Coconino. In Sedona, the Hermit and Coconino are separated by the 800' thick Schnebly Hill Formation which supposedly took 5 million years to form. The following information is from a paper published in *Sedimentary Geology*, Spring 2010.

At the right is a photo of a an injectite of Coconino going down into the Hermit. The paper concluded that the Hermit was not fully lithified (hardened) when the crack occurred. Thin sections of samples of the Coconino injectite show it was water-borne material. There are many such injectites with the largest (the one pictured is about 15 meters [48 feet tall] along the Bright Angel fault. The farther you get from the fault, the smaller they become. This is an interesting situation. There are several things that do not add up in the neutralists' scenario. **1.** The Coconino was flowing in as a liquid sediment. **2.** The injectite supposedly would have happened 5 million years after the deposition of the Hermit, yet the Hermit was not yet fully hardened. The Hermit should have been hard rock after 5 million years. 3. The paper concludes that the cause of the cracks in the Hermit was the earthquake that occurred during the movement of the Bright Angel fault. But, the Bright Angel fault was supposedly created 200 million years AFTER the deposition of the Hermit and Coconino! All the rest of the layers of the Grand Canyon would have formed and hardened during that 200 million years. Both the Coconino and Hermit would have been subjected to intense pressure for 200 million years, yet not have turned to rock. That is impossible! The data all fits if the layers were laid down rapidly in the beginning days of Noah's Flood and the fault formed immediately after deposition of all the layers, which would have had to occur in a few days at most.

Conclusion

Not one piece of data points to wind deposition exclusively. Some features can be caused by wind or water. Most of the data supports water deposition only! But we aren't done...

Icing on the Cake

The photo to the right is Lizard Head on the west end of Capital Butte. Notice that the Coconino strata looks like a parabola laying on its side. That is because it is a parabola laying on its side. The technical description is:

Parabolic
Recumbent
Fold

We have found 25 outcrops of Parabolic Recumbent Folds (PRFs) in the Coconino Formation covering 375 square kilometers in the Sedona area. We also have discovered one on the Pine Creek Trail near Pine, AZ and one at Wupatki National Monument, north of Flagstaff, AZ. In addition, there are two near Cave Springs in Oak Creek Canyon which are located in the Toroweap Formation.

When the NPS Ecologist (who escorted me - it is illegal to enter most of Wupatki un-escorted) and I found this fold (photo below) , we realized that the photo I had by McKee was reversed. The ecologist explained that it was common to do so back then in an effort to make it hard to find significant formations that were located in sensitive areas. Therefore, in honor of McKee, this photo is reversed. When McKee described this feature he called it a **slump**. He did so because at the time all formations had to be explained by slow and gradual processes. A slump was acceptable as it occurs after deposition. Interestingly, McKee later did research in flumes showing that structures like this are created during deposition.

Allen and Banks, Hunter, McKee and others have investigated PRFs

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