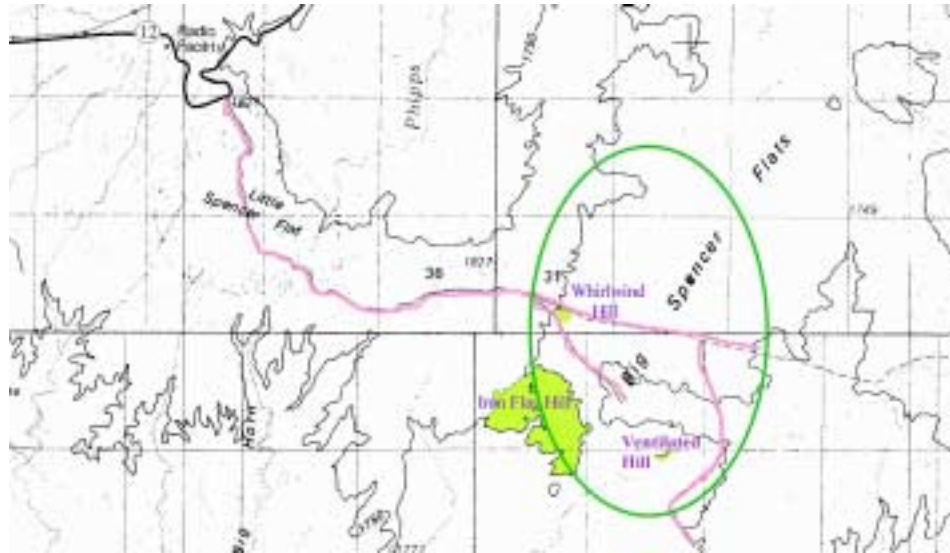


Moqui Marbles & Pipe

By David Crosby

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To get to Big Spencer Flat take the Old Sheffield Road which leaves highway 12. The turn-off is 1/2 mile beyond signpost 70 (just beyond the second turn arrow). As I recall you will cross a cattle guard about three miles down the dirt road, then find a steep drop off on your left. After getting to the second flat area you will drop down a very sandy section of road. Immediately to your right just as the road turns is "Whirlwind Hill." Don't pass it. Turn right and drive along the base of the hill and you will be on a road that is barely visible from the previous road. You are surrounded by Moqui Marbles on all sides from here on in. The same is true if you had continued with the Shaffer Road. You know you are in the area if you can see "Iron Flag Hill." All the dark spots in the foreground are Moqui's.



This is the Highlight of this site for me. If you have a GPS device, the location is: North 37.42.073 West 111.23.266 My daughter Sharon is sitting on some of the iron "Pipes" that radiate out from a fracture in the Navajo Sandstone into the sandstone itself. Some of the pipes are over thirty feet long and range from a half inch to a foot in diameter.



Pieces of the iron impregnated pipe material can be found in the first open space after passing Whirlwind Rock, and all through the area, so there used to be a lot of these formations, but they are all eroded away now.



The second photo is one of the few specimens still showing some of the original shell inside the now larger sphere! This stuff formed in the sandstone as groundwater passed through the area. I suspect a nearby volcanic eruption pressured the groundwater system and spurted out of the ground forming the pipes. Turbulence within the sandstone could have resulted in the iron being deposited in the spheres. There are areas where the still enclosed Moqui's are far apart and only 1/4 inch in diameter, other areas 2 -3 inches in diameter and packed side by side 3 to 4 layers deep - almost like oranges at a grocery store.



Moq12



Moqworm

Moq12 Now this gets exciting! The Navajo Sandstone was formed between the Triassic and Jurassic time periods, some 150 million years ago. Inside some Moquis [broken long before I picked them up] were **casts of ancient millipedes and beetles!**

Moqworm was something different. In 1999 I decided to clean up some of my material. A chip broke off one of them, and to my amazement, there was an earthworm coiled inside it! The whole "nightcrawler" was there! The skin was rubbery, but flexible. It was lined with transparent grains of sand. Was this a modern worm that had somehow crawled into the rock? There isn't any soil out there for miles! I set it aside and finished cleaning the other material. The next morning I picked it up again, but it was turning black, stinking, and rotting away fast. By the next day, there was only some pieces of skin in the groves in the stone, and where one end penetrated into the stone. I placed it on my scanner and made the "photo" you have here.

Anyone interested in collecting perfectly preserved creatures that have been hermetically sealed for the last 150 million years? It will take lots of searching, but **THIS IS THE PLACE!**



Moqr1aa



Moqr2-t



Mrock1

Moqr1aa should dispel any ideas that Moquis rolled along as they were formed. Part is round, part is the "pipe material" for want of a better term.

Moqr2-t is a small pipe from the area

Mrock1 The lines and flutes that start and stop and curve through this material is hard to understand. Looking through a 15X glass shows the surface has been sand blasted perfectly smooth, and you can see right down into the transparent sand grains. They are solidly cemented together with non-magnetic iron oxide.

Oh, I forgot to mention the broken marbles. On many of them, if you look on the inside with a 10 -15 X glass you will find here and there a single sand grain supported on a long filament of iron silicate seemingly floating in mid air!

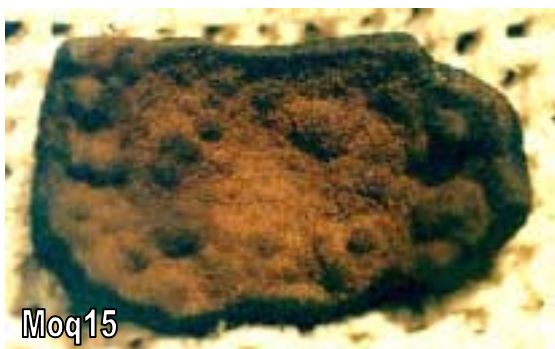


Ceeros1 demonstrates that tourists would be hard pressed to remove this material faster than erosion is.



Moq07a625-13 is an area where the small moquis are weathering out.

Moq08-995-13 shows a combination of broken Moquis and the very odd heavy sandstone that some mistake for dinosaur bone.



Moq15 shows the inner side of a Nobby shell. The "bump outs" are parts of the same spheres inside and outside.

Moq09-998-13 is a collection of the odd shapes Moquis come in ... they aren't all perfect spheres. The Nobby shelled ones are interesting as they record the growing together of many small moquis to form one large one.



Moq16 Two sliced moquis. The sand inside was there before the shell formed. The tiny black dots record the first arrival of iron oxide. The layers record porous and not so porous layers. You can dig them out of the sand they formed in and see everything line up.

Moq1aa happened to break along a porous plane and retained the iron oxide layer within. I dug some sand out showing the layers within the stone.



300 - 500 yards south of Ventilated Hill the Moquis are still weathering out of the original Navajo Sandstone.

The first photo looking north shows 11 different layers with the Moquis in them. The second is just a few yards south looking south.

Note: This area is now in a National Monument. All forms of collecting are prohibited. But I found David Crosby's article very interesting & educational.