

Maret's Mistake Trip Report 8/31/2010

Nevin Davis, Nathan Farrar, and Tony Canike (reporting) entered Butler Cave at 11am with the goal of setting dye traps in the stream in Maret's Mistake in preparation for a dye trace from Barberry Cave. We had a second goal of placing Nevin's hypersonic anemometer in the constriction near the beginning of Evasor Gallery to attempt an air connection between Backyard Cave and Evasor Gallery. By the title of this report, you might guess that at least the first goal was accomplished. I'm going to let Nevin report on the air connection experiment (you're going to want to read that report!)

At the constriction in Evasor Gallery, Nathan and I ate lunch while Nevin assembled and tested his anemometer. Nathan had a very fragrant fried chicken sandwich from Hardees', while I had PB&J on week-old high-protein dried-out whole wheat berry bread. Nathan didn't seem inclined to trade. Once Nevin finished his task we proceeded onward.

On arrival at Neptune's Throne, we set a second bolt. We had discussed this prior to entering the cave, and decided that there was enough work left undone in Marlboro Country to warrant a two-bolt anchor for future trips. Not having all day, this time we set a Petzl self-drive with a stainless hanger, a much quicker task. We statically equalized the two bolts and the two bongs using about 40 feet of webbing, and attached the 22m 10.5mm static rope that we had used for a belay on 8/29. We then rappelled down the rope, descending into the Ladder Room.

Nathan and I had never been down to the lower level of Butler Cave, and it's been 20 years or so since Nevin had been down there. Nevin said it looked very different; perhaps the mud floor had washed away in the intervening two decades. (This could also account for the inaccurate pit depth on the map.) Fortunately, I had a copy of the map, and Nathan had a compass, so we quickly oriented ourselves and tromped down Maret's Mistake. We noticed that the mud looked completely untracked, most signs of prior visitation washed away or covered over. When we arrived at the stream at the end of Maret's Mistake, we quickly realized that this could not be the Barberry Stream due to the very low flow – it was just a trickle.

So we turned around without leaving any traps. We left the 22m static rope at the top of Neptune's Throne to facilitate future trips (hint, hint.) While Nevin disassembled the anemometer we left in Evasor Gallery, Nathan and I ate pretzels and dark chocolate, a fine combination.

We exited the cave without incident at 6pm. Thanks to Nathan for schlepping two packs back and forth from Evasor Gallery. Future trips down Neptune's Throne will want to take about 40 feet of webbing and 4-6 carabineers in to rig the anchor; the webbing is useful to position the rope at the proper spot to go over the lip. As mentioned before we left a 22m rope for the actual drop.

ADDENDUM from NEVIN W. DAVIS via email 9/9/2010.

As Tony noted in his report, I positioned my 240 kHz. ultrasonic anemometer in the squeeze entrance to Evasor Gallery. (This after I had caught it and slowed it below hypersonic velocity.) The anemometer has a data logger attached to it to record the air velocity. The day before Tony and I had placed a power cord between my house and Backyard Cave to power a 30" dia. fan. This fan had been modified by Frank Marks to reverse every 100 sec. and was placed on the culvert which leads into the cave. There is a data logger with the fan recording the fan reversals. The clocks in both data loggers are synchronized to NIST time.

Judy turned the fan on around noon which just happened to be about when the anemometer was deployed. Five hours later when we returned from our Marlboro Country trip I disassembled the anemometer and packed it up for transport. Later that evening when I downloaded the data from the data loggers into my computer it was obvious even without doing the necessary computations that Backyard Cave was tightly connected to Evasor Gallery by air. The fan varied the Evasor Gallery airflow by nearly 19%. In addition the delay from a reversal in fan direction to it's detection in Evasor Gallery was about 16 sec.

In essence this means that Backyard Cave is connected to Butler Cave. Since Backyard Cave is also connected to Barberry Cave by airflow, Barberry and Butler are connected. Now it's up to the explorers among the readers of this to find exactly where and how!

For those of you who have not read the seminal paper on connecting caves by induced air flow see: Lucas, P.C., Marks, F. Jr., and Davis, N.W., 2009, A Method for Detecting Cave Connections by Induced Air Flow: Proceedings of the 15th International Congress of Speleology, Vol. 3, p. 2100-2105.