MARCH 2019

SATURDAY 16/3

Myself and Erin took part in a surveying trip to Wind Cave in South Dakota. For those who do not know of Wind Cave it is a marvel of South Dakota's Black Hills. The cave consists of a labyrinth of >150 miles (that's >240 km) of passages, categorised into 3 cave levels.

We drove up with Kevin and Jeff after work, and arrived to the house lent to us by the National Park shortly before midnight, having left around 17:00. And we were closely followed by the other group of "Cave Dave", Jake, Hunter, and Amy. By the time we arrived I was ready for bed, even after sleeping for an hour or so on the way up. We rose early the next morning, and stumbled over each other as we each tried to make breakfast with the spectacularly limited kitchen supplies provided by the Federal Government. The others had a good laugh at me for putting on an oversuit, telling me I'll be far too warm and that this cave is over 50°F (10°C). But let's just say I had the last a laugh there.

We got changed at the house and then headed down to the visitor centre where I had to fill in a form for volunteering for the National Park (which had the added benefit of covering me under their workers' comp.) while some conversations were had we wandered around the exhibit about the history of exploration the cave. When all was said and done, we headed over to the lift building and literally took a lift down to the cave. I was informed that it saved us walking down 304 steps1/. We galloped along the show cave route to make up time, eventually taking a small off shoot of concrete stairs up to a level where we could leave the show cave and enter the "Historic Section"2/. We stopped for a drink and to regroup in a large chamber, where I was asked what Irish people might say when they really wanted a beer! To which I naturally replied:

I'd murder a pint.

It was only a couple of weeks later that I found they used this to name a section of passage, so now there is a shitty, crawly, mud ceiling part of Wind Cave named "I'd murder for a few feet".

After what felt to be somewhat of an eternity we arrived to where we intended to begin surveying. Our group (Kevin, Erin, Hunter, and I) headed forwards and the other headed below us to survey the same area but a level lower, if I recall correctly they were about forty feet below us. Initially I was fairly rusty with

1/ I've been informed that the extra four on top of the posted 300 makes a big difference.
2/ I would suppose that the entire show cave itself is also in the Historic Section but I will continue with the distinction for now.

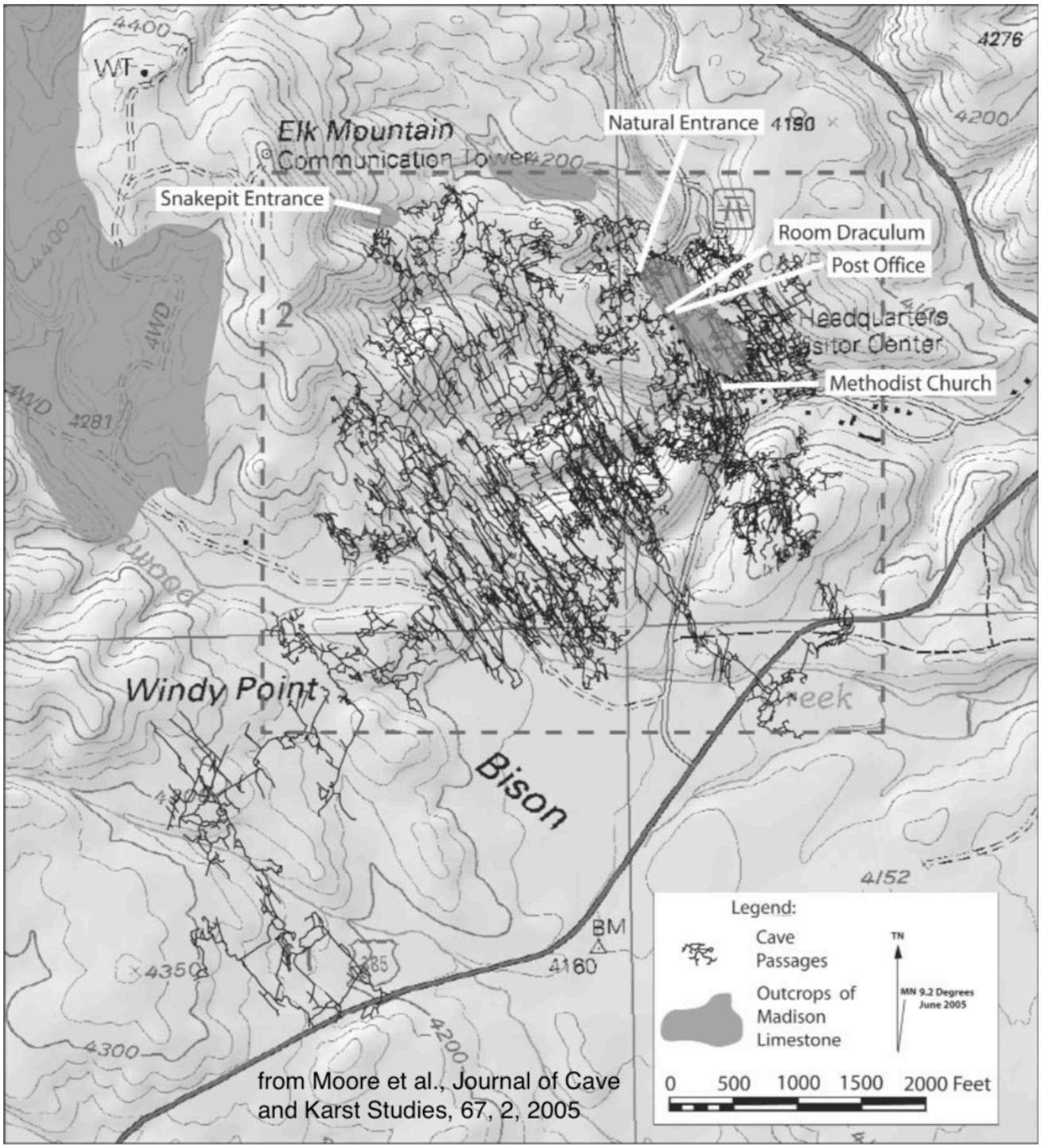

Figure 1: Overlay of survey of Wind Cave NP, from Moore et al., Journal of Cave and Karst Studies, 67, 2, 2005

my shooting, as it had been nearly a year since I'd last surveyed. We surveyed up around a the pit at the end of the passage, named Honey Bear Pit (because this was the HB survey), and down into a lead that went off to one side. In this crawl the ceiling dumped sandy clay down the back of my neck several times. Upon exiting this crawl we survey to a junction that "went" three ways. Erin, who was on point, decided to choose left first as she thought she could hear running water coming from that direction. This intrigued the Americans because Wind is not known for having much in the way of running, flowing or even dripping water. In fact most of the sources of water in the cave are mear steady drips. Lo and behold in a small-ish chamber there was a chunk of flowstone that was about five feet across that was wetted with a fair steady drip from the roof of the chamber.

Here we took a small break while Kevin took a few photos and some video, and he then had the thought that we should go have a look at the waterfall3/. Now I should make it clear here that the waterfall was normally a dry feature that cavers mearly knew as having been a place of water falling. When we got to it Kevin and I climbed the waterfall which was not any sort of torrent of water by standards any Irish caver would be used to but for Wind Cave it was a torrential sprinkle. This is where I had the last laugh with my oversuit.

When we went back to our bags, the single scale ruler for the survey book was dropped into a crack and even Erin couldn't wriggle herself down to get it. This put a quick stop to our plans to survey the rest of our leads. And I might add that I was feeling tired by this point, we were only four or five hours into the trip by then and with the Government shut down it had been 3 months since I was underground. Defeated we headed back to find the other group, upon explaining the situation to them, and informing them about the running water, they offered to try to retrieve the lost ruler. And amazingly they did just that, Jake somehow managed to wriggle himself in (after he had a pee that is). This enabled us to check out our leads which unfortunately none of them panned out. With one connecting back to where we had began surveying about 6 hours earlier. Myself and Erin were the only people to actually explore that lead because of a tight squeeze.

One final lead we looked at exploring was a fissure that ran parallel to Honey Bear Pit and looked to be about 40' deep, plenty deep to get to the same level as the bottom of Honey Bear Pit. We left it for another trip because of limited time and the fact the climb was on delicate boxwork. If you are not familiar with box work I recommend looking it up! Boxwork is a speleogen, a feature formed from erosion and not deposition. Imagine a wafer thin lattice or honeycomb of calcite protruding from the walls of the cave, these protrusions once filled cracks in the rock before the formation of the cave.

3/ To clarify, we found survey tags at the wet flowstone, and Kevin from his experience knew a dry waterfall had been noted on a previous survey in the area. Which Kevin had been to the top of before.

Figure 2: An Example of Boxwork

If you're ever in the Black Hills of South Dakota, Wind Cave and Jewel Cave National Parks are well worth a visit.