

Trip Report Muk K'in:

This Exploration project was an official Explorers Club flag expedition, so we were carrying the Explorers club flag nr 73 which you can see on some of the pictures. The main goal of the expedition was to continue to explore, add line and map the caves of Muk K'in and Kiix pepen hopefully one day being able to connect these two beautiful systems. We did check out some other cenotes in between, but nothing really looked like it would open up, and I will therefore focus on some of the more successful dives in Muk K'in. also not to bore you too much with a too long trip report.

Starting the trip with a steady warm up day in Media Luna (sistema Aktun Chen) where Natalie and I were practicing new techniques for carrying more gas for the upcoming longer dives. We have so far both solely been diving al80's but were wondering whether it would make sense to start sidemounting 18l steels instead. After 6 hours in the water, we came up with our own decisions – as I am used to carry lots of cylinders from deep wreck and cave diving, and as I only use a 6l camelback and drysuit, I decided that I would be carrying 5-6 al80cf cylinders at a time, where Natalie in her Razor II would be carrying one less cylinder, but then use 2 steel 18l's + 2-3 al80's to reduce the number of cylinders (and regulators) we needed. Very successful day with lots of equipment juggling and adjusting, which is a perfect way to get over your jetlag.

Muk K'in:

Muk K'in was originally found by us in October 2011, where I snorkeled the place, and decided it would be worth taking cylinders. Nat Vince and I have since had this cave as our primary project, and had before this trip added 4631m of line to this beautiful cave. Nat and Vince had on a previous dive found a lead going north west ending at 5100ft of distance from the entrance, it had a couple of sidemount restrictions, but then seemed to open up a bit into a nice tunnel going slightly deeper than the rest of the system averaging about 13m. Natalie and I decided to go for 5 al80's (2 al80's+18l) and give it a go.



The cave in general is very changing, starting in slight yellowish, with black sediment on the bottom, then about 17min of swimming into the dive it opens up into white very decorated cave and continues like that for a while. The configuration is mainly Large→small→large→ small which we have seen many places, but is especially significant here and also on the Helene line (a line we added on my sister Helenes 16th birthday).

We reached the 3700ft sidemount restriction just before drop pressure on the 2nd stage, and decided to take it with us just through the restriction. It is a very special place low, very little silt and with black stained formations but if you superman 1 stage it is possible to squeeze through, only real problems is the beginning and the end, where it is really tight. (around 100ft long)

After the restriction the cave totally changes, it drops in depth and becomes all white again, with smooth ceilings and square walls – but still with formations in places.

We reached the end of line in about 85min with still one stage left and quickly tied on the first reel with knotted line. Of we went, still going more or less straight north west, in big tunnels averaging about 70-80ft shot distances. The cave just kept going, bug getting slightly smaller and deeper going towards 16-17m and in places it really looks like we have leads dropping to a second floor below us, but we have to check this out on another dive. After emptying the first 1200ft Halcyon reel, we looked at each other – still gas to go, so we tied the second smaller (800ft) reel to the new line and continued to add line.

The cave got more twisty and continued to be averaging 17m, now being more silty, dark and with a lot of percolation. But we could also clearly feel the increase of flow! We hit turn pressure round about same time as we ran out of line! Emptying two rather big reels on this one dive – survey later showed that we added 2019ft of line taking the distance to end of line to 7200ft from the nearest entrance. Survey was long, swim home even longer! And we surfaced after about five hours under water still smiling from this fantastic dive.



The next day we weren't up for a long swim, so we decided to take 2 stages each and look at the eastern side of the cave. Unfortunately without any luck. We then tried again to take 5 tanks each and go for end of line, but had to turn the dive because we reached turn pretty much the same time as we reached end of line, due to an entanglement in one of the restrictions and us trying to find a scooterable bypass through one of the other restrictions (not successful either, but this way is still easier than the original one)

After a few days scouting new stuff, taking care of land owner relations, re-finding Kiix Pepen and diving that for a few days, we decided it would be worth checking EOL of Muk K'in again.

This time it would be Vincent and I conducting the push dive, with Natalie setting us up for the dive.

We met up with our 7 sherpas at 830 in the morning to carry the needed 16 cylinders to the water – Vince and I would be diving 6 each, Nat would be diving 2 cylinders for the setup and then 2 40cf oxygen cylinders would be placed at 5m in the entrance pool (not 6m due to cave configuration)



As we know our drop pressures and distances by now, going in was pretty easy, Nat was carrying two of our stages, so we only had to swim with 5 tanks for the first 3700ft of distance. Just before the restriction we dropped the stage and got a full one from Natalie who could then clean out the empty one (the extra 1/3 was then reserved in other cylinders).

The 3700ft point is just before the main sidemount restriction, and about 65min into the dive, so a good place for a break – Vince and I enjoyed our 10min break drinking a 50/50 solution of water and pedialyte and eating peanutbutter from small plastic bags :-S not that tasty but works like a charm.

After 10 min we continued through the restriction, this time with 4 full 80cf cylinders each at this point. Showing Vince this new part of the cave was very cool, he is definitely not into this for the sake of doing it – but truly because he loves caves, and seeing his smile and hearing his giggles when the cave changed made the trip very worthwhile.

When we reached the end of line, I could clearly see the disappointment in Vinces face, I had told him that the cave still was clearly going, but smaller at this point, but when being back there I started doubting myself. The cave went in 2 directions – both pretty small and both looked like they would pinch down rather fast. I descended to the bottom took a small amount of silt from the floor and threw it into the middle of the cave –lots of flow! We tied off the big reel and started laying line.

The cave stayed smallish for 3-4 tieoffs and then just opened up again! Huge white tunnels 15m wide and 5m tall. Vince led off with the reel in one hand the other hand showing a victorious hand sign, definitely not approved by PADI. We finished one reel with the cave still going strong in front of us, and we still had 10 bars in each tank left for exploration, but after emptying the first reel, we looked at each other and decided enough is enough. With a short celebration dance, we tied off the end of the line and started our long swim and survey out.

We picked up our stages on the way, and had another break around 4,5 hours into the dive, just after the 3700ft restriction. These 10 min breaks really makes a huge difference in how we felt after the dives, and

we will continue to use this tactic.

Natalie met us about 20min into the cave to take off our used stages and starting to haul gear to the sherpas – both for them to be ready to carry our bags when we reached surface, but also to get moving so we could get home before it would get dark. We spend 10 min on Oxygen at 5m due to us spending more than an hour at 17m and close to 6 hours in the water.



The survey showed that we added 1150 ft of line to the cave, making Muk K'in a total length of 5667m and our dive a swim dive to 8400ft from the entrance.

I cannot wait to get back to this cave, but I hope we can get our scooter problems sorted so we can scooter to the 3700ft restriction instead of having to swim all the way! Way to much work :-)

Great dives – great adventures

Team:

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