

Exploring Cave 3

by Peter Steinhoff

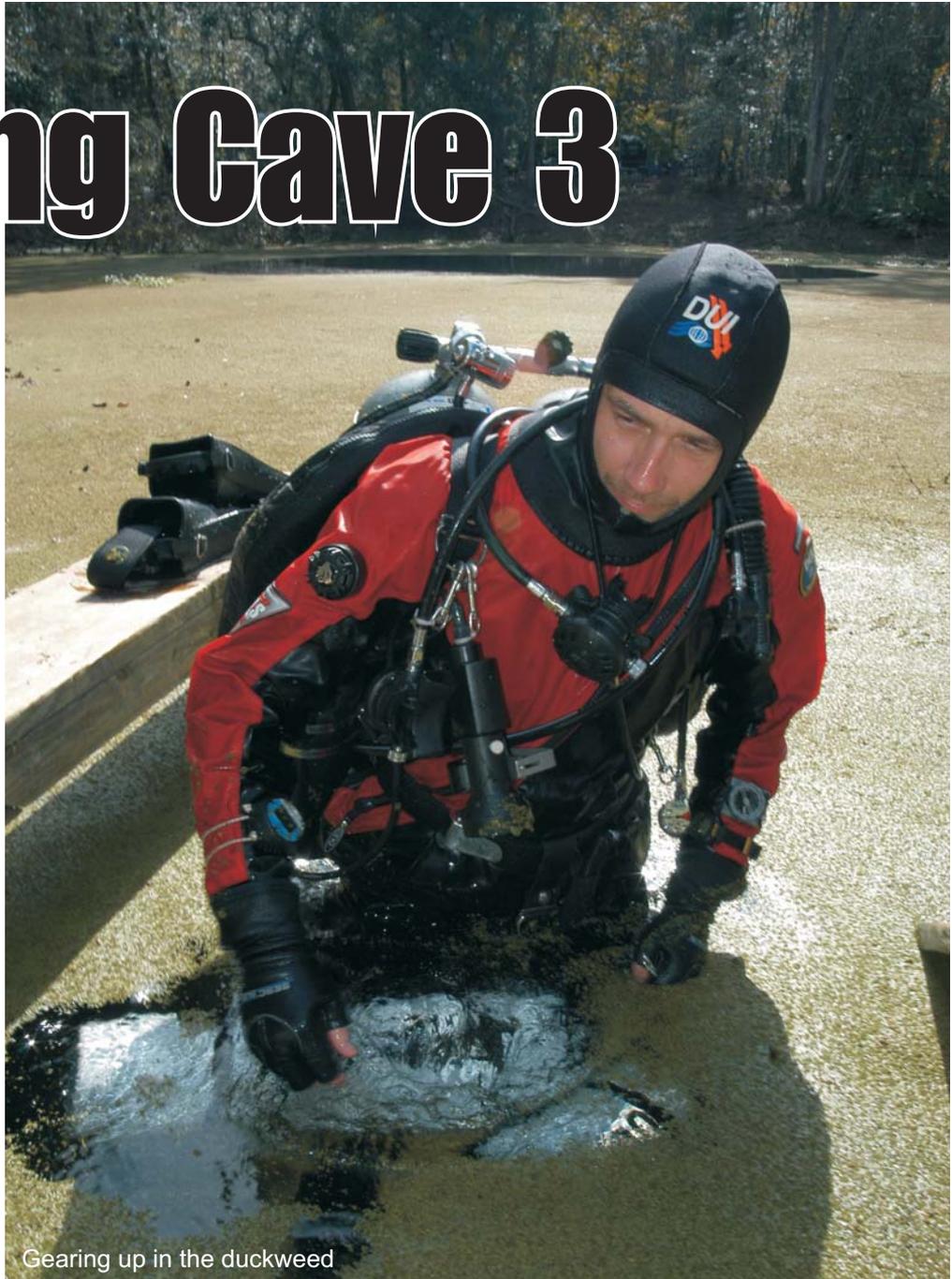
With our five stage bottles and double scooters we managed to propel ourselves through the restriction running the scooters wide open while kicking and pulling like mad men. Once inside we stopped to catch our breath. The cave welcomed us with dark walls, super high flow and very limited visibility - an overall hostile environment. But even though it looked pretty spooky it made me feel good because besides the flow, it reminded me of home - the low visibility parts of the Baltic Sea. Anyway, we exchanged okay's, hit the trigger and continued our journey forward...

Cave exploration - even in the minds of the calm and collected these magic words spark the imagination. It gives us a picture of beautiful virgin passages and the sensation of being where no man has been, seeing what no man has seen. Of course it all sounds fascinating and when the opportunity to participate in GUE's first ever Cave 3 exploration class showed up, it was something I just had to do. In this article I will give you an insight into the class, some of the skills that are taught and how this relates to the need of the exploration project.

Background

Cave 3 is the highest level of training in the GUE cave curriculum. At first it was to be taught together with participation and mentorship in an exploration project like the WKPP. That turned out to be impossible because in some areas you may have to wait months and even years for conditions that are good enough for exploration dives. The fact that the instructors would most likely be involved with the push dives and long-range setups also raised the question who would actually be teaching the class.

Earlier this year GUE's President Jarrod Jablonski and GUE's Cave



Gearing up in the duckweed

Training Director David Rhea sat down and reworked the Cave 3 class into something that could actually be taught. It turned out that Cave 3 would start where Cave 2 ends and focus on giving the students the skills, knowledge and experience in doing long-range cave dives and some of the work that exploration dives call for, like survey.

Of course it is impossible to learn everything you need to know about exploration in a relatively short period of time. That is why you still have to get experience and learn more by being part of an ongoing project, even if it is not required for the class. That said, the Cave 3 class is probably as close as you can get to the real thing and it has no peer in the cave diving community whatsoever.

The team

David Rhea was our instructor for the class. He is a really nice guy, originally from Tennessee, with an ever-present toothpick in his mouth - his trademark. David is also a WKPP rebreather and gas diver and has done exploration in many places around the world.

We were two students in the class; Alessandro Fenu from Italy, who has been scuba diving for more than 20 years, is an avid cave and ocean diver and dives with the EKPP team, and the other student was me, Peter Steinhoff from Sweden, also a frequent ocean and overhead diver and a support diver for the WKPP.

Exploring Cave 3...

Alessandro and I had both done GUE Cave 1, Cave 2, Tech 1 and Tech 2, which is also a prerequisite for Cave 3 together with a good amount of open water scooter experience.

Before I tell you how our Cave 3 class turned out I just want to point out that these classes will probably look quite different due to a number of reasons; for example the location of training, the condition of the caves, the instructors preferences, logistical issues and the weaknesses and strengths of the students. At the end of the day, it is however the standards and of course the instructor that will set the bar and let you know if you have what it takes or if you need to practice more to dive safely at this level.

Class structure

Our class was structured around eight full days with seven days of diving, and our training location was set to Gainesville in north central Florida, USA. Unfortunately many of the caves in the Gainesville area were closed due to flooding so David's new plan involved using Peacock, Devil's and Manatee Springs:

- Day 1 - A double stage swim dive and a backgas dive.
- Day 2 - Single stage scooter dives. Skills training in open water.
- Day 3 - Single stage scooter dives.
- Day 4 - Double stage scooter dives.
- Day 5 - Double stage with tow scooters dives.
- Day 6 - Preparation for the expedition and lectures.
- Day 7 - Triple stage, double scooter setup dive.
- Day 8 - Quadruple stage, double scooter dive.

Sorry to say that also meant we could not do any deeper dives but as David pointed out, Cave 3 is about exploration skills and you don't need depth for that, not even distance. What you need is some adverse cave conditions, because that is actually what the cave explorer will meet, and we got plenty of that...

Before the class

Alessandro and I met for the first time at Gainesville airport two days before the class. Some would find it surprising that two strangers from different countries would sign up to do an advanced cave diving class together without ever having met and let alone dove together. For the true DIR diver that is not be a problem since we are sharing the same beliefs, the same equipment, the same procedures and in our case also the same training.

Now we had two days of diving to prepare for the class, fine tune our teamwork and do some final checks on the equipment. The Sunshine State greeted us with nice and sunny weather even if it was November. Back in Sweden it was snowing so I guess almost any kind of weather would have made me happy though...

After a couple of stage dives in Devil's and some minor suit issues, which Steve Gamble in Gainesville expertly helped us resolve, we were now ready for the class.



Day 1 - Warming up

Our first dive was going to be a swim dive in Peacock. David wanted to check us out and identify any possible problems with teamwork, communication or multiple stagebottle handling before we were going to add scooters to the mix.

The plan was to do the grand traverse from Orange Grove to the Peacock entrance using two stage bottles and oxygen for decompression. It is about a mile long, 1600 meters, and usually takes around 90 minutes to complete. A nice warm up dive we thought, until we descended into the cave which was all covered with thick black silt that miraculously managed to stay there even though the cave was flowing like I have never seen it before. It took us almost twice the time, 160 minutes, to complete the traverse.

David was of course more than pleased with the conditions and said he enjoyed the scenery of the very familiar Peacock that now looked like a totally different cave. Having spent about four hours in the water it was too late for us to make a second dive so we packed up and left.

After driving to David's house in Gainesville, our residence for the first part of our class, we got some pizza and started to work on our gear. We talked about the scooters and started to burntest our battery packs. The burntime is essential for all dive planning involving scooters and our standard packs turned out to have 110 and 107 minutes each.

Day 2 and 3 - Single stage scootering

Each day of the class would build on the success of the previous day. That way the instructor could keep the students safe, deliver information and build experience in a controlled step-by-step way. Today it was time to add a scooter to the mix but instead of taking us to the larger caves David insisted that we would learn finesse first.

So we went to Devil's Ear in Ginnie Springs. The plan was to use a single stage, a little backgas and oxygen for decompression. Going in and out of the Ear turned out to be quite an interesting experience as it is like a crack and has some logs from the hurricanes partially blocking the high flow entrance.

Exploring Cave 3...

Just scootering against the unusually high flow did not get us through the entrance so my guess is that the flow was similar to a three to four knot current - quite powerful.

Our first day of scootering was somewhat lacking in the finesse department even though we got the job done. Between the dives we practiced towing, gassharing and swimming with the scooters while David documented our work on video.

The second day our scootering and speed had vastly improved. We also did long sessions of towing. When you get the towing right you can really feel it because the driver doesn't have to fight the drag or the scooter and you can both just cruise along without effort - a wonderful feeling.

Day 4 and 5 - Double stage scootering

Experienced cave divers talk about learning the cave. It is very similar to racing cars in a video game. To go faster you need to know how the track goes, how to position your car, what gear to use, how much speed you need and how to attack the obstacles in your way. Too much speed or being at the wrong place and you will lose valuable time. The only way to learn this is to race the same track over and over again, each time going slightly faster. And that is exactly what we did - we did basically the same dive over and over again.

David would simulate different failures during the dive like light failures, gas failures and scooter failures. During the debriefs he would give us valuable tips on how to improve our scootering in difficult sections, what to look for when dropping stages and how to improve our teamwork and positioning. We also practiced laying line and did a lot of jumps with the scooter.



Checking our bottles before the dive...

David had us use both stages and a little backgas because he wanted us to do as many gas switches, stage drops and scooter drops as possible. We also got to see some nice passages that had forever been ruined by unskilled sidemount divers.

After the fourth day, our third day at Ginnie's, we were getting tired. Getting up at 6.45 every morning, setting up the equipment, transporting scooters, doubles and stages between EE, the car, David's garage and the caves, spending six hours in the water every day, getting home late, working late on equipment, doing burnttests and balancing scooters and going to bed around 11 or later took its toll. During the day we didn't feel on top of the game and we weren't.

After some lectures that evening and a good night's sleep, we did two very well executed double stage dives. David said we took a quantum leap that day and we were all very pleased.

Day 6 - Preparing for the expedition

We were to spend our last two days at Manatee State Park doing a small "expedition". This place has a long history of cave exploration and cave legend Sheck

Exley writes about it in his book "Caverns Measureless To Man".

Today's plan was to prepare all equipment, having everything charged, filled and ready to go before 4 o'clock when we had to depart for Manatee. We would setup camp in the camping area inside the state park, preferably before dark, and we would stay there for the next two days.

Due to our tight schedule we never had a chance to burnttest our primary lights and it turned out that my primary 18W HID only had 3.5 hours of burntime, which indicated a dead battery. Because it was Sunday we were facing a big problem but of all places Radio Shack actually saved the day and I could assemble a fresh battery pack for the light.



Exploring Cave 3...



Clipping on some stages

the only ones there. We motored up to get our second scooter and the four stages we were going to bring; two stages for breathing and two stages that we were going to place in the cave for tomorrow's dive.

After descending and heading for the cave entrance Murphy struck us again. This time Alessandro's primary light died and there was not much to do about it so we aborted the dive. Because everybody had to be out of the water before 5 we did not have time to fix the light. Alessandro looked like a sad little puppy but we had no choice. David and I had to do the setup for the three of us.

After changing scooters and making the second drop I turned the dive and we headed back. During the exit it was necessary to use the scooter at maximum thrust to power out of the flow and avoid crashing into the cave walls. We had to be careful not getting the tow scooters entangled in the line behind us while traveling at this high speed.

Everything went as planned and we finished the dive with a short deco.

Day 8 - Quadruple stage double scooter dive

Today was the big day. The bad news was that David had cancelled our surveying because of the conditions.



The good news was that we only had to take our doubles, our scooters and two stages each down to the water. After ten days straight we were all getting tired of hauling equipment.

We suited up and dipped into the duckweed. After clipping in our equipment we dropped down into the entrance; Alessandro was first, I was second and David third. Carrying only two stages is was a lot easier getting through the entrance. Because we did the setup dive yesterday our other two stages were waiting for us well inside the cave.

After the delayed departure to Manatee the evening was spent setting up the camp. We were using David's big fully equipped trailer and he wanted us to call it "Camp David". Alessandro and I just shook our heads and smiled. Before turning in we enjoyed our campfire and the joyous company of a reindeer, some squirrels and a hungry raccoon.

Day 7 - Triple stage, double scooter setup dive

We checked in at the Rangers office early because they only allow a certain number of cave divers each day. After assembling our gear we took it down to the offset sinkhole called Catfish Hotel. It is a beautiful place but the surface is covered with green duckweed, which is a nasty type of flower that you don't want in your reg.

We used one stage for setting up our oxygen bottles, putting in a primary reel and also placing the 70 foot bottles, drinks and food inside the cave. In the cave entrance the flow was raging worse than ever, the visibility was way down and we could see why we were

Now loaded with five stages and two scooters each we forced our way into the cave by using sheer will power and everything else we had that could help. We got out of the immense flow and stopped for a second to catch our breath. Manatee is a dark cave and its sharp, jagged walls absorb any light around it. When the cave has a bad day, like today, some people consider it intimidating and aggressive but we would not let us be discouraged. We continued on forward.

I was leading the dive with David trailing me. After hitting the half plus 200 on the first stage we dropped our used stage, one full stage each and one of Alessandro's bottles. We switched to our second stage bottle and it was difficult because the only spot I could find had a lot of flow and the line was in an awkward place. We checked each other's stages, ok'd and went on. Disgruntled I found the perfect stage drop just ten seconds later over the next hill.

The line went from left to right and the cave went up and down like a rollercoaster ride. While ducking and sometimes reverting to aggressive last second turns I managed to avoid hitting anything in this dark place.

Exploring Cave 3...

We cruised along until we approached Sue Sink. It is a restriction where you need to go all the way to the right to avoid the flow. We all did that but Alessandro's scooter seemed weak and he was pushed backwards, unable to pass. The difficulty lies in the fact that you can't pull on anything here so it is just scootering and kicking while being at exactly the right place. After four unsuccessful attempts, the last one while swimming, Alessandro decided to turn the dive and we headed out.

On the surface we discussed the problem and while Alessandro's scooter seemed ok, it was certainly the slowest in the bunch. Our real problem however was that we did not have enough gas for three persons to make a second dive long enough so that we could fetch our



The six scooters we used

own bottles inside the cave. Since I dove yesterday, when Alessandro could not, I decided to give them my full stages and sit the dive out.

Their dive was a success and when they arrived at deco I cleared them from their equipment and took it to the surface. After packing up and heading back we did the written exam and the swim test. The class was now over and it was with a mixture of joy and sadness I said goodbye to David and his family and to my new friend Alessandro who had been an excellent dive buddy during the class.

Summary

The Cave 3 class gives you the basic tools and skills to do long-range dives that requires multiple stages, multiple scooters and extended decompression, but most important it gives you an appreciation of the effort it takes.

Exploration is always goal oriented and often involves having multiple objectives at the same time. A good team player will be able to work in different capacities to ensure that those objectives are met. That could involve many things like helping out with blending gas, taking gear down to the water, placing decompression gas inside the cave, acting as a safety diver, doing setup dives, doing exploration, checking conditions inside the cave, transporting bottles out of the cave, being surface manager etc.

It is also easy to underestimate the preparations required to do any of this. Just keeping your gear in perfect order gets progressively more time consuming. If you are doing longer dives you will probably have four or five scooters, around 20 regulators, at least as many stage and deco bottles, several primary lights, a couple of drysuits, probably a rebreather and the



This is just the minimum...

list just goes on and on. You also need to maintain a fitness level so that you can keep your concentration during long dives and also be able to do extended decompressions. Of course your diving skills needs to be sharp and you need to be on top of the game when it comes to decompression and planning.

When I signed up for the Cave 3 class I wanted more than just a scooter class on steroids. I wanted something specifically geared towards exploration and I got what I wanted. I think what we did is the limit what you can realistically do in class without having the full support of an exploration team. I also believe that if you have the commitment and want to play in the big league some day, Cave 3 will truly give you a head start.

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About the author

Peter is an avid wreck and cavediver. He is currently a member of the WKPP and holds a Trimix Instructor rating for NAUI Tech Ops. He is also the Gavinscooter representative in Sweden.

Among his contributions to the DIR community is his trimix blending charts and recreational minimum deco tables. He is also a frequent writer on several national and international forums and mailinglists.

Right now he is building hours on his RB80 and working towards a cave instructor rating. When he is not diving, Peter is developing industrial software solutions as well as being a certified group fitness instructor.