



Florida Cave Diving - *are you mad!?* August 2000

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Trip Report by Philip Rae

We were 100m (300ft) back in a cave with no light and two of the four divers out of gas. Our sole means of navigation is a thin line fixed to the cave walls, but strangely we were all relaxed and calmly feeling our way ahead.

Of course it was just a drill, being carried out at the end of our week-long introductory cave diving course. I was undertaking a course run by the Global Underwater Exploration (GUE) organization based around the extensive cave networks in High Springs, Florida. The GUE is a relatively new body that advocates a cerebral approach to diving which appealed to me in this potentially dangerous activity.

It all started a year ago when a 'cave diver' started at the laboratory where I work and we started to talk. Strangely, he did not seem to be an adrenaline junky playing 'chicken' with traffic on the nearby motorway at every opportunity. Instead he had deep understanding of diving physiology and techniques. Underwater he moved with a smooth, accurate and seemingly effortless manner that I could not begin to match.

As I read more on the internet and elsewhere, the idea of improving my own underwater ability grew in appeal. Firstly however, to take the GUE Cave 1 course I wanted, I had to considerably alter my existing diving equipment to streamline it for use with a twinset and a powerful long-duration canister light (for more information on this see the websites listed at the end of this article). I also undertook an advanced Nitrox course since undertaking some of the dives on the course would become difficult to safely perform on just air.

Work found me in the United States in August so I arranged to take the course at this time. In retrospect I had not realised quite how warm it was going to be (35°C [95°F] and 70% humidity), this made getting into your drysuit somewhat of a masochistic activity even with the limited undersuit required for year around constant 22°C (72°F) water.

Day 1, Ginnie Springs

Joining me on this adventure into the darkness were two Americans, one a fellow sport diver currently living in Texas the other taught scientific diving skills in California. After filling in the appropriate forms the first morning's classwork was spent looking at the history of cave diving and learning the new underwater signals used including light, visual motion, touch and written methods. In the afternoon we were to visit the cavern at Ginnie Springs. This pattern of theoretical learning followed by practical experience was followed for the rest of the week.

After having practised line drills around the trees in the car park it was obvious that even laying out a guideline was going to be an interesting challenge. To discourage open water divers from venturing into caves the permanent guidelines only start several meters after the sunlight in the cavern zone has disappeared. For this reason each group of divers is required to lay their own guideline to this main line in case of reduced visibility on the return journey.

The Ginnie Spring site has several caves on the property. However, the actual Ginnie Spring is only a cavern dive since a metal grill has been placed after the initial large room. This allows open water certified divers to enter the spring with torches; something that is strictly forbidden in the full cave systems. We used the cavern zone to practise the modified fin kicks and pull-and-glide techniques that we would use for the rest of the week. The traditional flutter kick used by open water divers is useless in a cave since the down-wash picks up silt and sand from the bottom and reduces visibility. Instead, either a modified flutter kick is used where the knees are bent at right angles so that the feet are above the body, or a frog kick is used. The frog kick is very efficient and few divers once accustomed to it use anything else, even when returning to open water. The pull-and-glide is as the name implies hauling yourself along by pulling on the cave wall. Obviously this technique is not suitable on coral reefs but the limestone caves do not seem to mind. The second exercise was laying a line and following it in a zero visibility situation. This is easily simulated by removal of your mask and shutting your eyes. In this situation a group of divers huddle close and use a simple touch system to control progress.



Cave Diving is not an activity to take lightly.



Buoyancy control is obviously an important issue since continually bumping the roof is embarrassing whilst dragging yourself along the bottom is going to severely annoy following divers in your group and yourself on the return journey. Great emphasis is placed on buddy skills and each diver has specific tasks that they need to perform during the dive. Unlike open-water where two is the ideal group size, in caves a team of three is preferable, mainly because it reduces task loading and increases safety particularly in the event of an emergency.

Day 2, Peacock Spring

This was our first dive in a true cave. Owing to the alleged drought in Florida while I was there (I find this a little suspicious since it must have rained 2 inches in the week I was there) the entrance to the cave was via a swamp with 0.3m visibility. Once inside the cave it opened up to the usual 40m visibility. Our first dive was in the so-called pot-hole tunnel. This was a large cave that seemed to contain a variety of life despite the total blackness. We saw a shoal of catfish, a 1m long eel, several small albino crayfish and the shell of a long dead turtle. We were unmolested on this dive by our instructor, Tamara, who calmly hung above the three of us without a light on. This was all to change on the following dives.



Entry to Peacock Spring.

During the next dive in the Peanut tunnel at Peacock the first of many main light 'failures' occurred, this simple exercise requires the deployment of a backup light and a re-ordering of the group. In fact with such a simple failure you normally stop to reel in your guideline on the way out. The Peanut tunnel is what most people imagine cave diving to be like, pristine white limestone and relatively little headroom.

Day 3, Devil's Ear

This was our first go at a high flow cave. We returned to Ginnie Springs but this time were to dive the Devil's Ear. In normal years this spring delivers 43 million gallons of pure fresh water a day through an entrance which would only be wide enough for two divers to pass through at a time. Therefore forcing yourself into this cave takes brute force. I had the task of stopping and tying a guide-line to the cave wall, needless to say it did not go smoothly at the first try. We all quickly learned to heed advice about swimming at the top of the keyhole shaped cave since the flow there was much lower. The one advantage of these high-flow caves is the effortless ride back out, but holding on to untie the reel is another adventure.

The surface intervals are spent in the water otherwise you get too hot. The debriefings generally centred on our old open-water habits of kneeling on the bottom while sorting out problems. Unfortunately in caves this results in silt being stirred up which makes the situation worse. Full de-programming of this habit was going to take longer than the five-day course, but I was slowly getting better.



Devil's Ear.

The second dive at Devils Ear was better technically, we were all much more elegant in our swimming and finally started to see how it should be done even if we were not up the required standard yet. Once you get through the narrow entrance the cave opens up and small offshoots become visible. Each cave has its own 'look' and rock personality that you recognise after diving it only once. The quality of the limestone varies from brittle material filled with fossils to dense smooth rock that appears to have no defects. One nice aspect of cave divers is that they tend to leave interesting features in the cave rather than putting them on their mantelpiece. The turtle shell at Peacock has been there for over 20 years and one cave in Florida still has a set of dinosaur bones, whilst another has a mammoth tusk sticking out of the wall.

Day 4, Little River

We dived at Little River about half an hour from High Springs. It is so named because the water from the spring forms a shallow river that runs a little way into a much larger but tannic river. The entry is under the trunk of a dead tree and has a distinct 'cavey' feel to it. The depth quickly drops to about 12 or 13 meters before entering a horizontal section. After a little distance it drops off again to about 27m, the deepest dive of the course. Due to the modest surface interval this is one of the dives where Nitrox is really useful. I enjoyed this pair of dives despite the little 'inconveniences' that occurred along the way including my finstrap coming undone. The task of re-threading was made easier since there is no need to wear gloves in these caves.



Little River.

Day 5, the final day, Telford Cave

The morning was taken up by the written exam that covered all of the safety related material discussed in the previous four days. The three of us having undertaken a surprisingly rigorous revision session the night before over dinner passed with pleasantly high marks although some of the sarcastic suggestions by all of us for one of the questions might have resulted in negative marks if Tamara had felt mean.

In the afternoon we went to Telford Cave system about an hours drive from High-Springs. Telford is a free site and so visited by the locals for the purposes of swimming. Without being too specific lets just say that some stereotypes of people from the deep south are borne out in fact.

There are two sinkholes (entrances to the surface) within 200m (600ft) of the exit to the spring. The main line stops at these points since it is theoretically possible for open-water divers to enter from these, hence jump spools are required to span the gap. For safety, divers at the Cave 1 level are not allowed to do jumps to side tunnels, but in this case since one is just moving to the same main line it is felt acceptable. The tunnel at Telford is not a high flow cave. For this reason, there is considerable sand and silt on the bottom of the tunnel. This made it more important that we demonstrated our best buoyancy control and finning technique. Towards the end of this dive after having collected our jump spools we undertook the lights out, air-sharing drill which I previously described. This exercise is hardly realistic since it requires the failure of nine lights and an 'out of gas' diver to pass his regulator to another 'out of gas' diver! However, it is really a drill to increase confidence. Needless to say, the visibility in the cave after we had passed through was not quite as good as when we went in.



The Telford Cave System.

The last dive of the course, as one might expect, had the greatest number of 'problems'. When Tamara scabbled around in the dark at the top of the cave with no light, only popping down to perform some dastardly deed to our equipment, she reminded us of the creatures in the ventilation ducts in Aliens. However, at the end of the dive we all learned that we had passed, though I expect that it was a close run thing in my particular case. I had really enjoyed my five-day course but it had left me with a strong understanding of my own only too apparent underwater limitations.

The proof of the pudding is in the eating and discovering that our flights were far enough away the three newly qualified cave divers decided to undertake a couple of dives at Peacock on the Saturday morning. The dives were highly enjoyable and went well, but oddly we were all a little surprised that no one ran out of gas or had a light failure.

References:

Information about the course and suitable kit configuration.

- [Global Underwater Explorers](#)
- [Gas Diving UK](#)

General information about the area:

- [Ginnie Springs](#)
- [High Springs](#)