CAVE DIVING in FLORIDA: DIFFERENT REGULATORY APPROACHES

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Recently the National Speleological Society (NSS) Cave Diving Section (CDS) invited me to present an analysis of cave diving risk management at its annual cave diving workshop, near Live Oak, north central Florida. The area is known among cave divers as "Cave Country" for the many flooded caves and kilometres of flooded passage to explore. This latest trip, my fourth to Florida, was by far the best.

Meanwhile, back in Australia, the Cave Divers Association of Australia (CDAA) was commencing a series of state meetings to discuss, among other business, potential access arrangements for their newest acquisition, Tank Cave, near Mount Gambier. With ownership of this complex phreatic system, came the opportunity to review access requirements which were previously determined by the former owner, who was not a cave diver. In the last two years two Australian cave divers have run out of gas and drowned in Tank Cave and the CDAA now need to make some difficult decisions, largely based on expert opinion, rather than hard evidence.

For example, the thorny question of whether to allow "solo diving", as diving alone is known in the sport. Solo diving is usually executed as a calculated and deliberate undertaking in circumstances where diving as a team would be less than optimal, for example when exploring a tight new section in silty conditions. It is usually the preserve of the sport's elite who compensate for the added risks in various ways, for example by taking more gas than usual in case of time-consuming difficulties, and by having another solo-diver on standby in case of delay. Many of the newest discoveries in Australian cave diving this century have been made by solo-divers, often with the tacit approval of land-managers, (who must sometimes be relieved when our explorers return triumphant). Solo cave-diving is not for the timid. Nor is it for the foolhardy.

During this latest stay in the Florida cave country I was lucky enough to experience a range of access requirements and this article considers these arrangements. The examples given are not unique and there are many, many other caves with similar access conditions to each of the caves below. No comment on the safety of any specific access condition is implied.

Little River Spring

Little River Spring is situated in a county park with prescribed opening hours. Entry is free. Divers simply park in the car park near the toilets and take the wide stairway down to the water. Gearing-up benches are provided. Park rules include an alcohol ban and this is sometimes policed. Rules concerning cave diving are not policed during open hours. As is common in Florida, solo diving is not specifically banned. The cave is relatively deep by Australian standards, around 30 m on average, with many confusing passages to choose from and to get lost in. Indeed, Little River is one of the deadliest caves in the world, with dozens of cave divers drowned here in the past 40 years.[1] Still, almost daily cave divers of all experience levels arrive to dive and cave diving instructors bring classes here while holidaying families look on with open curiosity.

Wes Skiles Peacock Springs

The Wes Skiles Peacock Springs State Park is not too far away and is probably the most famous diving cave system in the world. The "Grand Traverse" involves a mile (1.6 km) of flooded passage through which divers enter in one pond and exit through another. It is considered by many a rite of passage and is described in training manuals as an example of how to plan a traverse. Alligators are sometimes found in the ponds and there was reportedly one in the third pond while we were in there diving, although I didn't see it. Peacock has too many blind tunnels to remember, silty sections, beautiful narrow passages and delicately sculptured walls. It is the pinnacle of cave diving. Visiting divers leave $4 in an envelope at the park entrance and display the slip on their dash along with their diver certification (so the park ranger knows if a diver is missing at closing time or merely a non-diving visitor). Solo diving is not allowed and neither are Diving Propulsion Vehicles (DPVs), known as "scooters". Hundreds of cave divers safely visit Peacock each year although, on average, one diver per year dies here, usually after getting lost and/or running out of gas.[1]

Cow Spring

Next, in terms of increasing access restrictions, comes Cow Spring, a wonderful underground maze owned by the NSS-CDS. Divers must be members of the NSS-CDS or an affiliate such as the CDAA. Proof of this must be shown at the local dive shop, an indemnity

The most famous cave dive in the world.

must be signed and then the key is handed over. Divers then drive to the cave, let themselves in, lock the gate behind them and thereafter they are totally self-reliant. Though ownership of Cow Spring resembles that of Tank Cave in South Australia, that is where the similarity ends. Cow is deeper, the walls are darker, divers must usually battle substantial flow whether heading upstream into the spring or downstream into the siphon. Divers have run out of gas and drowned in here too. There is a list of instructions outside the cave detailing what directions to give the emergency services when calling for help. Solo diving is not specifically banned, nor is it condoned, much the same as in many Australian caves.

Ginnie Springs Park

Ginnie Springs Park is home to the Devil's System, another of the most famous diving cave systems in the world since featured in the bestseller "The Last Dive" by Bernie Chowdhury. The park charges an entry fee, certification levels are checked and a waterproof colour-coded wristband is worn by every diver. These wristbands detail their level of certification and also if special equipment can be used, such as DPVs or Closed Circuit Rebreathers, which are a more complex type of scuba. There are gearing up benches, toilet blocks, a training facility for classes and staff check each diver as they enter the water.

The cave is almost always busy with dive teams heading in and giving way to those heading out. Visiting divers sign an indemnity release which refers to the buddy system. Exploration is not encouraged but can be arranged with the management, preferably during quieter periods and newer sections have been discovered in recent times. As new technology becomes common then new rules are made in response. In this regard the management is pro-active. This year, for example, I was required to show proof of training for DPV use, although we don't yet have such training in Australia. Probably because of our low numbers we still use the time-honoured method of gaining experience gradually. "Experience?" laughed the manager. "Honey, everyone's got experience" she said, dismissing the many kilometres I've scootered in some of the world's best caves, in Europe, Australia and in Florida.

Indian Spring

At the top end of access restrictions I visited Indian Spring in the famous Woodville Karst Plain in western north Florida. Indian Spring is infamous for being the first cave to collapse while divers were inside.[2] Finding their exit blocked the pair started digging through the sand, silt and rubble till the first diver squeezed through and dashed to his decompression tanks as he ran out of gas. Tragically, his buddy drowned before reaching the spare tanks. Upon arriving I met the appointed guide. The managers maintain a list of authorised guides and each guide is permitted to escort up to a maximum of two divers at any one time, and only when the YMCA campground in which the spring is located is otherwise unused. As required I completed three pages of paperwork, supplied a list of my last 100 cave dives, my dive insurance policy details, cave diving qualifications and showed proof of certification to dive while breathing trimix (a blend of oxygen, helium and nitrogen). The dive was wonderful, serious, we wore five dive tanks each totalling 58 litres, and swam to 1,000 feet penetration at 50 m depth before returning to the warm entry lake for decompression to prevent the bends.

Eagles Nest

Finally, it was time for the last dive of my trip, in the famous Eagle's Nest, a wonderfully deep cave in a state agency controlled Wildlife Management Area. We drove for two hours to get there, left a few dollars in an envelope, signed the visitor book and assembled our gear. No supervision, no indemnities to sign, no proof of training required. Five dive tanks each and soon we were at nearly 90 m depth, breathing exotic gases, photographing each other, masters of our own destiny

and responsible for our own safety. I had come full-circle in terms of access, through increasing levels of oversight and back to my personal favourite, self-responsibility. There was a dual fatality here in 2004 involving fully-trained cave divers using scooters. Three of us dived together today, which is the most commonly preferred team size in cave diving. Even in a team though, at significant depth there is only so much anyone can do if you need help.

So, a range of access requirements is in place in Florida, and in Australia, and the variety reflects the range of cave-diving conditions, owners and patrons. Each circumstance is individual and the author does not believe a single set of rules would suit all caves. There is no evidence that cave divers have a higher mortality rate or a lower life expectancy than the "normal" population. Where I live, in Western Australia (WA), people over 15 years of age who die while diving recreationally represent just 0.013% of all-causes mortality, which does not appear over-represented.[3] There are an estimated 30,000 active recreational divers in WA, out of a population of 2.4 million, which is ~0.013%. Cave divers would be the most highly trained among them and, worldwide, thousands of cave divers safely make thousands of cave dives each year.

The warning sign at Eagles Nest

Author at Indian Springs

Finally, it is instructive to think that cave managers might have some influence on the likelihood of people dying whilst cave diving. With humans being essentially self-correcting systems cave managers probably have, in reality, only a very modest influence. Often rules appear in place more for liability than safety and the absolute risk may not change to any measurable degree with increasing access restrictions. Ultimately, life and death are decided though the interaction between genetic and environmental factors, a process called "Natural Selection". By attempting to regulate human behaviour, the main influence cave managers exert upon that process is often merely where it takes place, (i.e. somewhere else), and never is this more true than when a cave is closed for diving.

Editor's comment

Peter's last paragraph poses some interesting questions. Just how much influence can managers have over how people behave? How well can managers protect people from themselves? Once the systems are put in place, it is largely up to users, if they choose to take risks there is little managers can actually do.

References

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