By Dr Keith Cardwell

Caverns, Caves

Spooky? Scary? Exciting?

My first experience of going into a dark hole was weaving myself into an air raid shelter the family had built on our property in England, just in case planes got that far and threw a bomb or two at us. Dark, smelly and full of rat pee, I couldn't imagine anywhere more squalid to spend the night. I thought that a direct hit would have been more acceptable.

After emigrating to New Zealand, I joined the Civil Defence in Auckland and put through the paces of abseiling and crawling through purposefully fractured old paving slabs and boulders made up as makeshift caves. I didn't think much then of ever spending time musing over what else could be interesting underground - or even the most obvious of things - how to get back out again.

That isn't the case underwater though and the holes we are often tempted to dive into offer a lot more of a challenge. It's wet, cool, you need to take air with you and a cry for help probably won't be heard.

This type of diving by its very nature is challenging, exciting, exhilarating and there's not much to compare it with other than penetrating wrecks. For that reason, some of the tips here could equally be considered applicable to when we also go wreck diving.

I'm not an expert at cave diving and I know my limitations. However, I have taken a few tips from those that are and what I think should be shared with all divers. So if you are interested in this activity, here are a few pointers:

*Get trained in it! It doesn't matter how qualified you are in other diving activities, go to a recognized, professional cave diving instructor and get a proper job done. In NZ, there are several dive operators like Tech Dive NZ and NZ Diving who can put you on the right path. In Australia, the "go-to" organization is the Cave Diving Association of Australia (CDAA) who run a three tier programme leading up to full cave diver certification.

Following this first tip (taking a course) would take away the need for me to go any further with this essay but there will be some that might wish to avoid formal training and do it regardless anyway. Please! Don't!

Cave diving is not just tying up a rope, following it and having a couple of lights on you to see around corners. There are other points to consider that are made far clearer through discussion and practical application on the course/s you take.

Some of these points are:

• Conservation and local law – observation of local laws may prohibit access to certain sites unless permission is granted by either landowners or other local authorities that may place restrictions of entry.

• The difference between Caverns and Caves; the commonly defined differences are that in a Cavern you can see light and gain relatively easy access, whereas in a Cave, you can't and you can't!

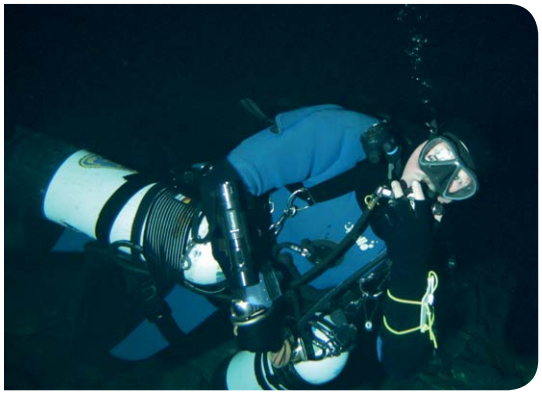
• The differences between sea and freshwater cave types and their respective characteristics, besides tasting differently.

• Entries & Exits and how to set them up; walk in or get hoisted down?

• Silting up, buoyancy control and whether you can do a simple thing like breathing from an air pocket to save air (or is it air?).

• Hazards and restrictions and how to deal with problems when there's a silt-out and you have to sort things out with no sight.

• The right equipment including redundant or spare everything as an



Tripod to help the descent.

Practicing laying lines.

essential safeguard in case of failure or loss.

• Communications, line tying and stress recognition and reactions to it.

• Limitations of time, distance, overall and contingency planning

And then there's the practical stuff!

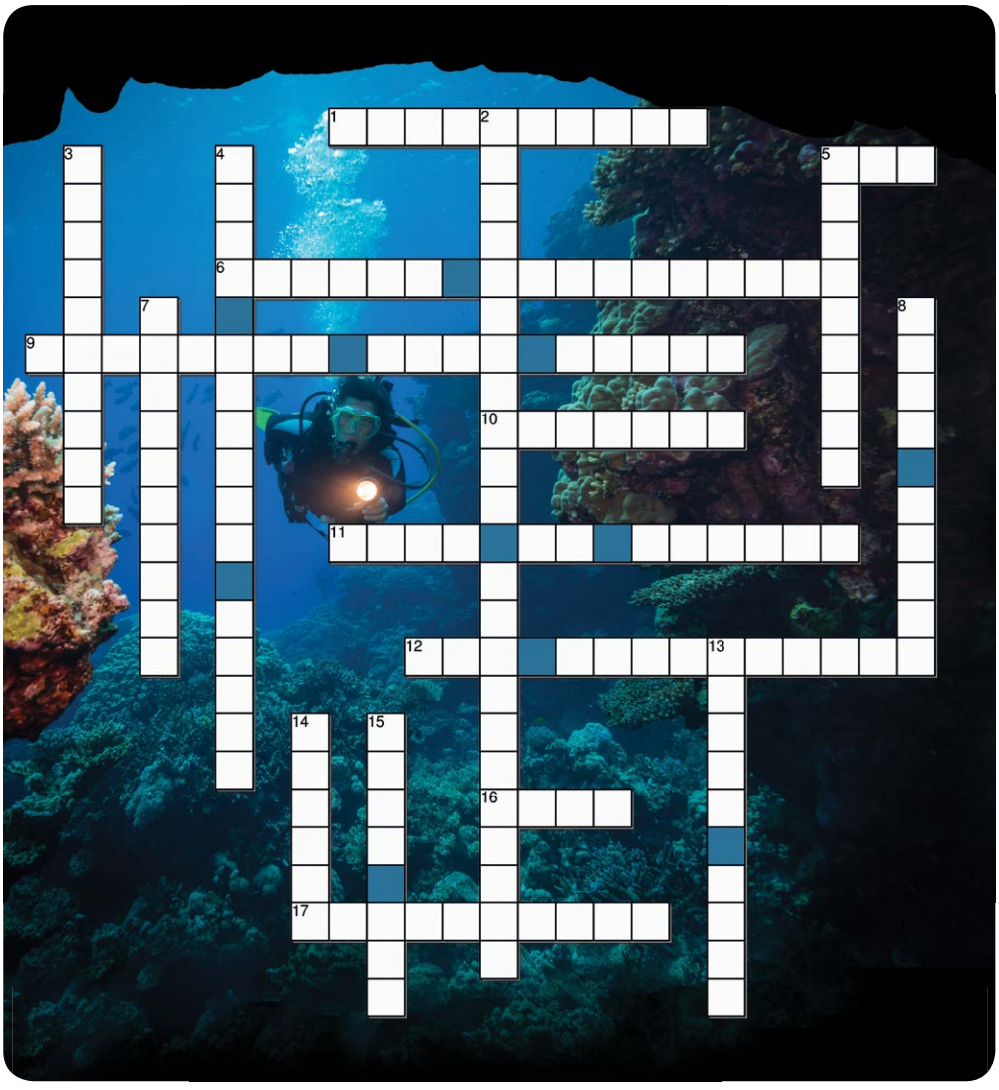
First and foremost would be getting your gear sorted out and modified if necessary so that you can reach and use all of your required "bits" – like reels, lights, spare mask, slates etc.

Secondly come land drills for practicing line laying and use, sighted and blind.

Then it's into the water to get a crack on with skills that you thought you were already fairly good at and… .so it goes.

Hopefully, this might bring to the surface some of the knowledge and skills required to do this sort of diving. But just like most endeavours, once you have achieved basic qualification, that's when we find out there's much, much more to learn.

You will probably never need to concern yourself with ducking into an air raid shelter in the near future or putting up with the whiff of rat pee, but if unprepared for caving, you might wish for that as an alternative to where you find yourself. So if you wish to get a lot more adventurous and excitable about diving into caves and places out of the ordinary, find a well-qualified and experienced instructor or instructors and don't waste any time getting started. It's a real adrenalin rush!



Across

1. Scientific study of caves
5. Australian Speleological Federation
6. Probably the most famous of underwater cave systems in NZ
9. Full penetration and cave diver certification
10. Mexican term for sinkholes
11. A "rule-of-thumb" for safe return
12. Part of the process of working out how long you can stay underwater
16. The Australian Cave diving body
17. Cave dweller

Down

2. First stop to become a qualified cave diver
3. Term used for back-up systems
4. Primary cave diver certification
5. Frequent method of reaching cave diving site
7. Often key holders to caving sites
8. Illumination
13. Primary direction finder
14. Document allowing dive site use
15. Problem arising from poor buoyancy control

Crossword answers issue 145
Across: 1.rust-3.rinsing-7.neoprene-8.yoke-9. capillary-12.mouthpiece-14. Regulator-16.piston
Down : 2.spring-4.silicone-5.line cutter-6. Unbalanced- 10. Pilot-11.bezel-13.bourdon-15. Oring