



opinion

Text by Simon Pridmore  
Photos by Andrey Bizyukin

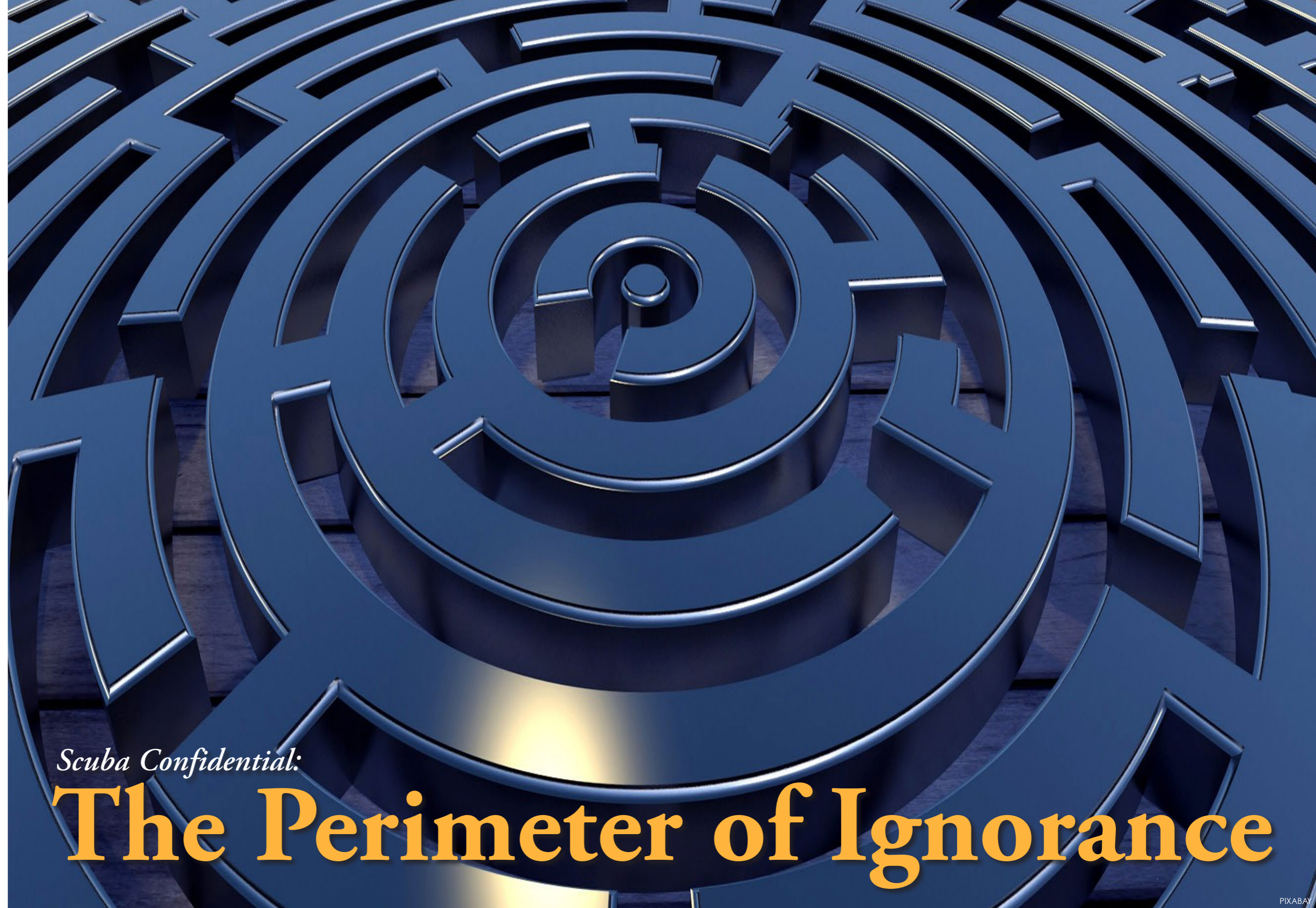
**Albert Einstein is quoted as saying, “as our circle of knowledge expands, so does the circumference of darkness surrounding it.” In other words, in expanding our awareness, we just expose our ignorance. The more we come to know, the more we realise we do not know.**

This makes a lot of people uncomfortable. Astrophysicist and cosmologist Neil Tyson has described what many people do in response; instead of searching further, they build a wall around what they know so they do not have to see the darkness beyond. He refers to this wall as “the perimeter of ignorance”.

How is this relevant in the world of scuba diving? Let me begin with a story.

### A story

Robert was sitting quietly at home one afternoon, when he received a call from a woman who introduced herself as a friend of a friend. She asked him if he



*Scuba Confidential:*

# The Perimeter of Ignorance

could recommend an operator to take her and her husband to dive off Nusa Penida, which is an island off the south coast of Bali, famous for big fish, cool water and strong, unpredictable currents that make it a notorious accident black

spot, especially for new divers.

Robert asked about their experience and the woman told him that she and her husband were “advanced divers”. He pressed a little more and found out that they had only learned to dive a few

weeks earlier and had done nine dives, all during their training (when I had my dive centre on Guam, the reception staff used to refer to such folk as “AD 9s”).

On hearing this, Robert suggested that, as diving around Nusa Penida could be

tricky, they might prefer to try some of the wonderful diving in easier conditions off the village of Tulamben on Bali’s north east coast. The woman was highly indignant at Robert’s implication that she and her husband were “not excellent divers-

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## Ignorance

praise and insincere enthusiasm to blind them to their limitations. They were "advanced divers". There was nothing they could not do. Next stop, a little rescue training, and then the path towards instructor. Yes, scuba diving really is that easy: there is nothing to it.

### Instructors & experience

You cannot really blame the dive instructors. As the industry today is structured, they themselves may not know much beyond the materials and skills they have been taught in their own (often short) diving lives. No instructors can widen the scope of a student's knowledge beyond what they, the instructors, know themselves.

This was one of the factors that drove me to write my "Scuba" series of books. My aim was to enable people at various stages in their diving lives to see "behind the wall". "Scuba Fundamental" tells non-divers how to prepare for a scuba course, explains what will be involved and offers them a guide to what their first 20 dives should look like. "Scuba Confidential" imparts knowledge that veteran and technical divers acquire from intensive training and/or years of experience. "Scuba Professional" shows prospective career divers what to expect from the industry and shares some of the secrets of success, while "Scuba Physiological" aims to

which we are" and hung up on him.

Two days later, she gratuitously called Robert back to tell him that she and her husband had gone to Nusa Penida and that they had had a perfectly wonderful day's diving. "So there, everything you were telling me was wrong," she said. He did not even know where to start explaining the various issues involved, so he just told her he was glad they had enjoyed their dives.

The couple had evidently graduated from their courses with no idea of their limitations. Nobody had told them that, as new divers, they should ease themselves gently into the sport and that, no matter how intuitively talented someone may be, it takes a lot of practice to become an "excellent diver". They were also unaware that many dive sites around the world, even

popular ones, are genuinely dangerous for beginners

### Misplaced confidence

Instead, all the high-fives and "great jobs" they had received during their training had encouraged them to believe that, having completed the courses and obtained their certification cards, they were now ready to dive anywhere. Indeed, their misplaced confidence was so deeply entrenched that it even induced them to over-ride common sense and dismiss the well-meaning advice of someone who had been introduced to them as a knowledgeable diver.

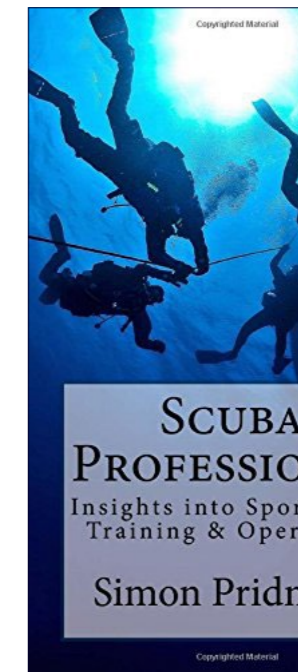
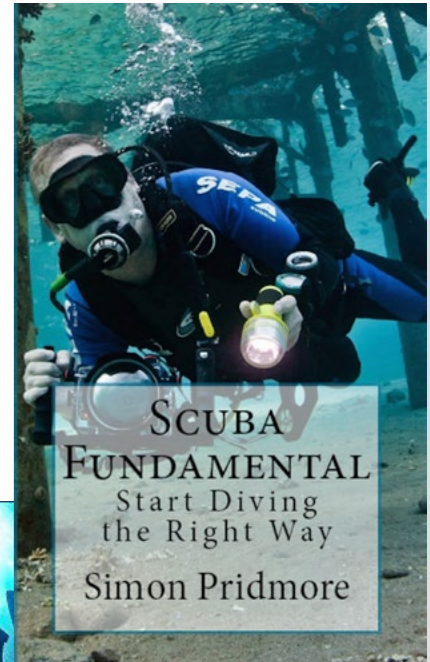
Their instructor and the agency that provided them with their training materials had conspired to build a perimeter of ignorance around them, using carefully chosen information, over-cooked



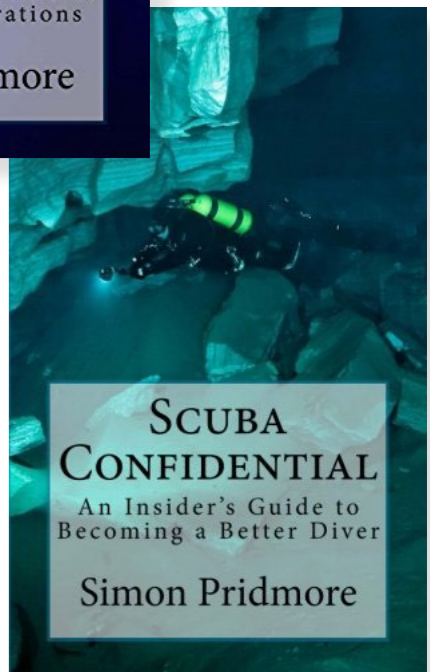
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# opinion

give all divers access to the cutting edge of decompression research without blinding them with too much science.

## Technical diving

The advent of technical diving broke down the wall for many divers, revealing as it did the secrets of the military and scientific diving communities and applying them to sport diving. Technical diving pioneer Richard Pyle was reflecting Einstein's concept of the "circle of knowledge" and "circumference of darkness," when he wrote about his early days on rebreathers. He said:

"After my first 10 hours on a rebreather, I was a real expert. Another 40 hours of dive time later, I considered myself a novice. When I had completed about 100 hours of rebreather diving, I realized I was only just a beginner. Now that I have spent more than 200 hours diving with a closed-circuit system, it is clear that I am still a rebreather weenie . . . it takes a fair amount of rebreather experience just to comprehend what your true limitations are."

Pyle was not only tearing down the perimeter of ignorance but actively embracing the idea that the more you know, the more you find there is to know. This should not be surprising-after all, he is first and foremost a scientist himself.

## Sport to technical diving

However, for divers coming into technical diving from mainstream



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sport diving, the perimeter is still in place. I remember having lunch with a group of technical divers where we were swapping stories of deep dives on CCRs. During the afternoon, a friend who had been listening in-a veteran diver who used to do single cylinder deep dives on air in his youth (as we all did) but has no technical diving experience- asked me what it would take for him to get to do dives like the ones we were discussing.

I thought about it for a couple of minutes, plotting the route from single cylinder air diver to CCR Trimix diver in my mind and factor-

ing in the cost of gear, dives and training. I told him, "Two years and US\$20,000."

His face registered shock, and I watched as his surprise turned into something else. Like the woman in Robert's story, my friend took offence at what he saw as my suggestion that he was not a capable diver. I mollified him, explaining my answer in more detail and eventually he understood. In turn, I apologised for my lack of tact in having torn down his perimeter of ignorance a little too brutally.

## Early days

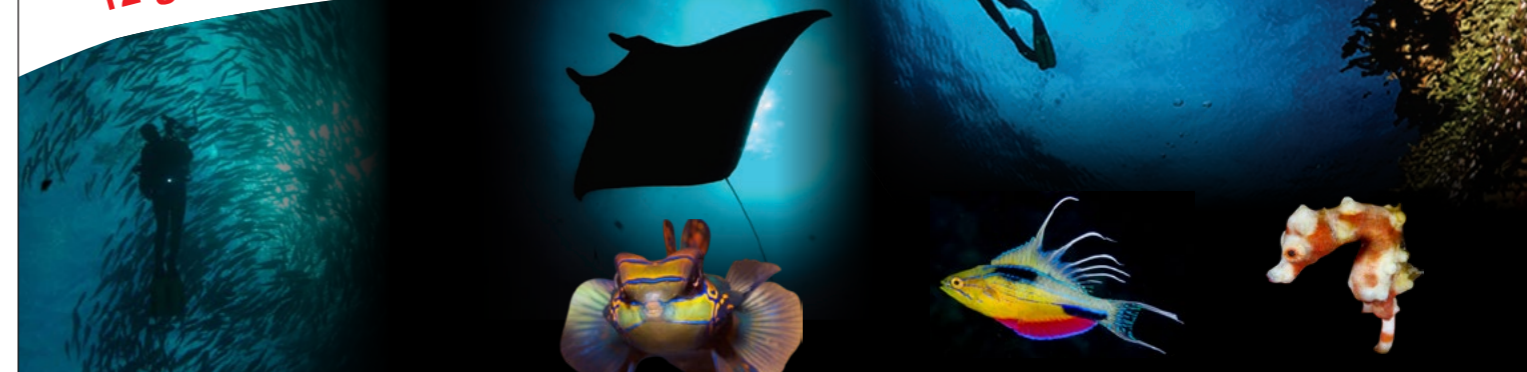
In the very early days of sport



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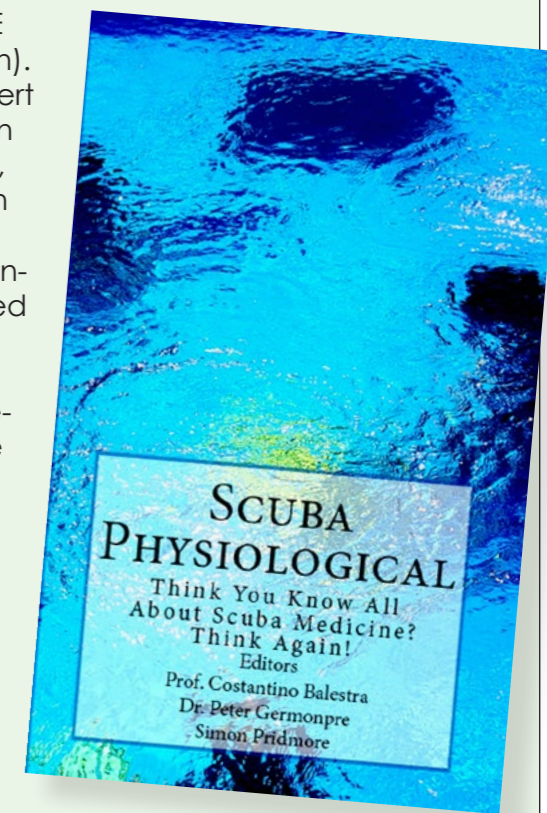
## A New Book for Scuba Divers!

If you are a diver, much of what you learnt about topics such as decompression sickness and narcosis in your scuba diving class is over-simplified and some of it is just plain wrong, as diver training agency texts have not kept pace with the science. Despite 170 years of research, the nature of decompression sickness and decompression stress remains unknown. Great advances have been made to make diving safer, but there are still glaring gaps in our knowledge. *Scuba Physiological* provides us with a good summary of what we know, a glimpse of where current science is taking us, and some good tips to make us all safer divers now.

The chapters in *Scuba Physiological* were originally written by scientists in the field of decompression research as part of a three-

year project called PHYPODE (Physiology of Decompression). Simon Pridmore is not an expert on diving medicine but, when he came across the material, he knew that many people in scuba diving beyond the scientific community would be interested in it. So, he contacted the original authors and proposed an abridged, edited, simplified and re-formatted e-book, which would make the information more accessible to the general population of divers. They thought it was a great idea and *Scuba Physiological* is the result.

*Scuba Physiological: Think You Know all About Scuba Medicine? Think Again!* by Simon Pridmore is available on: **Amazon.com**.



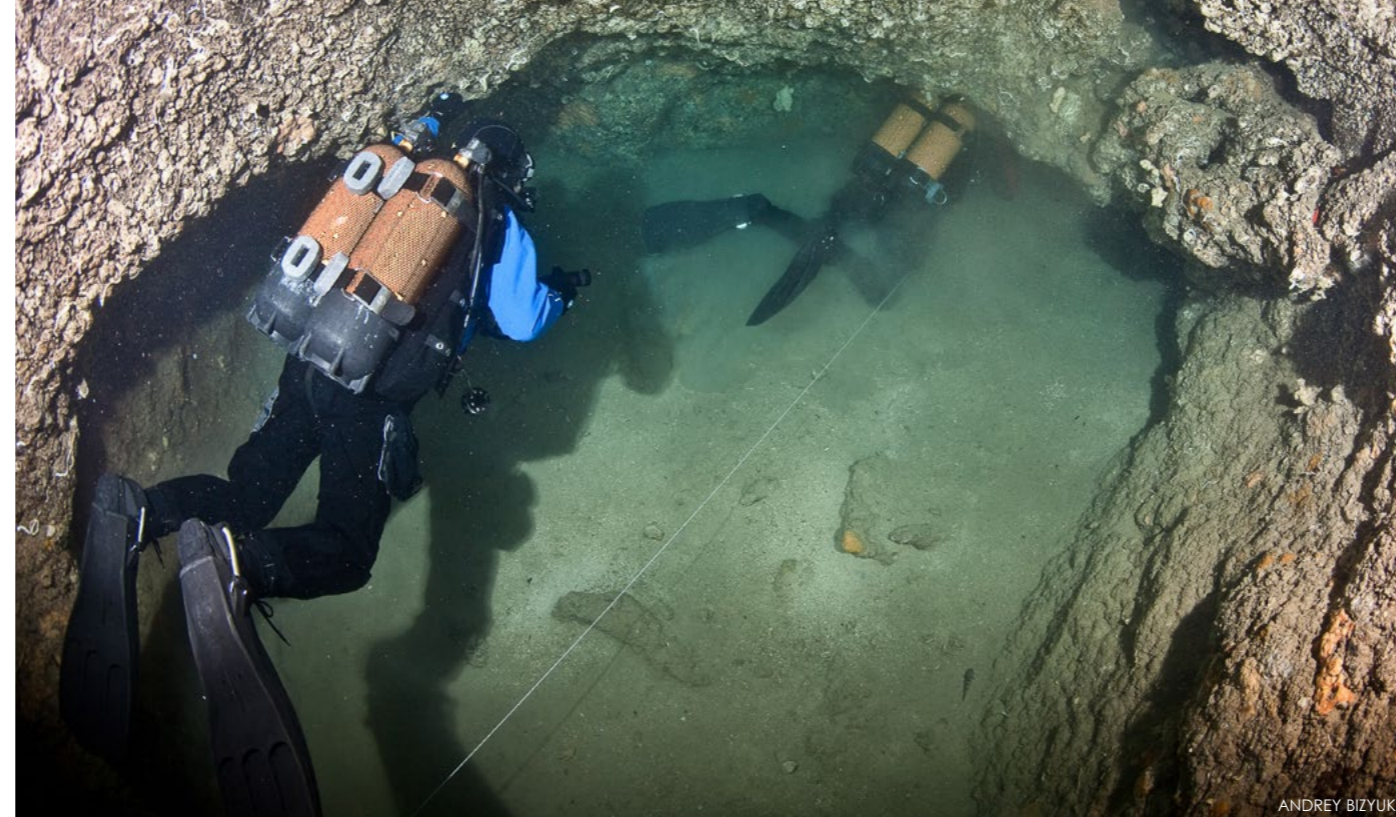


# opinion

rebreather diving, before Richard Pyle had done his first 200 CCR dives and reminded us all about the "circle of knowledge," very few people in sport diving had any idea how to dive rebreathers. It was really a case of the "one-eyed folk in the land of the blind." Many very experienced divers jumped onto the newly available technology and immediately took it deep. This was why they had invested in it, after all. They thought they knew every-

thing about diving, but this was a completely different type of diving, one that lay beyond their perimeter of ignorance. Some survived and learned; others died using the new machines.

Today, we know much more about the mindset, skills and tools required to dive rebreathers safely within a sport diving framework. Magazines like *X-Ray Mag* and regular conferences like Oztek, Eurotek and Tekdive USA help divers keep



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abreast of new ideas and new technology, and the accepted wisdom continues to be questioned as the sport evolves.

## Comprehending limitations

Having said this, the circumstances surrounding a number of recent rebreather accidents are an indicator that the lessons tragically learned by the first generation of sport rebreather divers are in danger of fading into history, and Richard Pyle's words of warning are not being heeded. There are signs that new CCR divers do not adequately comprehend their limitations and are coming to harm as a result.

With the blurring of the lines between regular sport diving and technical diving, it is important that the circle-of-light concept is kept well in view and that training agencies do not start fencing in the knowledge in order to try to broaden the technical diving market and generate more business, thereby building similar

illusions around technical diving to those that exist in mainstream sport diving. From time to time, one hears recruitment messages along the lines of "dive with us, become an XXX diver and everything will be OK". These sound to me suspiciously like attempts to build a perimeter of ignorance. ■


*Simon Pridmore is the author of the international bestsellers, Scuba Confidential - An Insider's Guide to Becoming a Better Diver, Scuba Professional - Insights into Sport Diver Training & Operations and Scuba Fundamental - Start Diving the Right Way. He is also the co-author of Diving & Snorkeling guides to Bali and Raja Ampat & Northeast Indonesia and a new adventure travelogue called Under the Flight Path. He recently published two new books, Scuba Physiological - Think you Know All About Scuba Medicine? Think Again! and Dining with Divers - Tales from the Kitchen Table. For more information, see his website at: [simonpridmore.com](http://simonpridmore.com).*


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