



The Science Behind Technical Diving

Interview with Bret Gilliam

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For my senior Capstone paper, I wanted to explore the idea of how technical diving relates to other extreme sports such as sky diving or snowboarding. A requirement for that paper was to speak to someone who knew a lot about the subject so I decided to email Bret Gilliam, the author of the book I was reading at the time called Deep Diving. When I first emailed him I had no idea I would end up speaking to one of the most important and influential people in the technical diving industry. Not only has he been on more than 18000 dives in his lifetime but he has worked as a diver for many different professional organizations such as NOAA and Navy Divers and is now a multimillionaire. The purpose of my interview was to find out why he became involved with technical diving initially and why he dedicated his life to it there after. At the time when I wrote the interview I was looking at technical diving through the eyes of an (obviously) inexperienced recreational diver who had no idea what she was getting herself into and conversing with him was a real eye-opening experience for me and gave me a much better perspective on what technical diving is and why people do it. Following is my interview with him in which we discuss his personal connection to technical diving. I have also included a link to his own personal blog, which is much more informative about his accomplishments and ideas than I could ever be. The man is truly and inspiration to me and I thank him very much for his help.

1. How old were you when you initially became interested in technical diving?

Although I began diving in 1959, the term "technical diving" did not come into use until about 1991. Many of us were actively involved in all phases of what came to be known as technical diving going all the way back to the mid-1960s. This included use of non-standard breathing gases (nitrox, trimix, heliox, oxygen decompression, multi-level dive profile calculation and use of early analog devices for such, deep diving, wreck and cave penetration and exploration, in-water recompression for emergency treatments when evacuation was not an option, redundant equipment rigs, enlarged scuba cylinders for more gas volume, etc.

2. Why did you become interested in it?

I guess the initial interest was simply to allow increased depth, range, and safety for our exploration and work projects. I was also a Navy diver, commercial diver, and NOAA diver so a lot of what we were doing was adapted from those segments. We also modified a lot of military and commercial diving procedures to add more range to our other diving.

3. Why do you dive now? For pleasure or work?

I've done over 18,000 dives in my career. I still dive actively all over the world. My primary interest is exploring remote areas of the Indo-Pacific (Solomon Islands, Indonesia, Papua New Guinea) for film work. I also do a lot of accident investigation and legal work as an Expert Witness where I need to go to the accident site to evaluate the conditions and replicate the accident through photography and the production of exhibit graphics. And I still am in pretty good demand as a writer/photographer so I do a lot of articles that are published both in print media and on-line magazines.

4. What is your favorite thing about technical diving? What is your least favorite thing?

Technical diving protocols make diving safer and more efficient. But what scares me the most are divers that attempt to get involved without proper experience, fitness, and training. Diving can be very unforgiving and if you screw up on a deep dive, in a cave, within a wreck, or on a rebreather there is a high risk of fatality. You have to be qualified and constantly aware of contingency protocols. Always expect that things will go wrong and you won't be surprised.

5. Which aspect of technical diving, the physical or mental most appeals to you?

I couldn't say either one is the most appealing. It's simply using the tools and technology to get the job done with the highest level of safety and risk reduction. So it's a combination of mental and physical skills.

6. What types of diving adventures have you been on and which one is your favorite?

I've been lucky enough to travel all over the world and, in some cases, be the first to ever dive a particular area. That's always a thrill. I love work that involves photography and filming. But some of my most exciting diving has been on military and commercial projects as well as saturation diving. But, in truth, I really love all diving. It's all good.

7. Do you prefer technical diving to recreational diving? Why?

I need to note that technical diving is part of recreational diving. It's just part of a far more advanced niche. It comes down to the equipment packages, gear, and methodology you use in your dives. If I'm filming pygmy seahorses in the Solomon Islands, then standard scuba is fine. But if I'm filming hammerhead sharks at Cocos Island, then I prefer rebreathers.

8. Do you ever feel afraid while diving?

That's tough question as I really don't think that way intellectually. I'm confident of my skills, physical strength, and methodology so I don't think that fear is an emotion that I experience. However, I'm constantly aware of risks, threat scenarios, contingencies and have almost instinctive reactions to situations now.

9. Have you ever been in a life threatening situation? Countless times... I've survived a shark attack in 1972 that killed my buddy when I went back to try to rescue him, had several bends cases that had to be treated in the field, been rammed by whales when filming, left at sea by dive boats that messed up and forced to make ridiculous long swims to shore or hours drifting while waiting to get found and picked up, suffered all sorts of bites, stings, tropical infections, broken bones... But I managed to reach the age of 60. I guess I'm pretty resilient.

10. If you had the ability to do any other sport you would like instead of technical diving, what would it be?

Oh well, I played hockey and football in college. I guess everyone briefly thinks about going pro. But diving made me a multi-millionaire so I can't complain.