

TFH E08: In Too Deep: The Dive I Barely Survived (Dr. Richard Pyle Part 1)

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SPEAKERS

Dr. Richard Pyle, Tony Vega

Tony Vega 00:00

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TFH intro 00:40

Transmissions from Hawaii!

Dr. Richard Pyle 00:58

The only reason I was able to walk again, the only reason I can still walk at all today is not because I healed. The dead nerves is the nerve cells probably died that day in Palau. The reason I am able to walk is my brain learned to reroute the same signals through different redundant pathways in my spinal cord. And based on the amount of time it took my brain to learn how to do that, I've basically used up - this is how it was explained to me - I basically used up all of my redundant spinal cord nerves for motor function. Which means if this happens again, I probably won't recover, I probably won't be able to walk again, because I don't have any more surplus nerves for my brain to use to reroute the signals to my legs.

Tony Vega 01:46

I'm Tony Vega, and the voice you just heard belongs to Dr. Richard Pyle. He's the senior curator of ichthyology at Bishop Museum here in Honolulu. Ichthyology is the study of fish and Dr. Pyle very much is an ichthyologist - he loves studying fish cataloguing fish, whenever he's able to he goes diving,

looking for new species of fish. Today, we're not going to talk about his work, though, that's for part two. On this episode, we're going back a bit in time, all the way back to 1986, to hear about the incident that he alludes to in that first clip you just heard. It's the kind of incident that would scare most of us away from diving, but the way that Dr. Pyle tells it, it ended up being one of the most important, and perhaps in a way, best thing that ever happened to him.

Dr. Richard Pyle 02:33

So when I was actually 18 years old, I was at the University of Hawaii and took my first semester as an undergraduate, and although I knew, I felt that I wanted to follow an academic career, I also had a passion for diving and aquarium fish. And so when I had the opportunity to go live in Palau, Micronesian islands in the western Pacific, and catch aquarium fish and dive every day, I decided to put school on hold and I went ahead and did that.

Tony Vega 03:04

So as a self-described fish nerd, Dr. Pyle is absolutely loving it in Palau. But then things get even better because he ends up meeting just about the best person he could ever hope to meet.

Dr. Richard Pyle 03:16

While I was down there, the world's most famous ichthyologist, Jack Randall, John E. Randall, came down to Palau and needed somebody to dive with. And so I had a boat and scuba tank, so I took him diving. And because he was, you know, the Grand Poobah guru of what my own passion was - coral reef fishes - I obviously spent as much time as I could talking to him about and learning about all of his discoveries, he discovered more new species of fishes than anyone in history, so he's really, you know, had the career that I wanted.

Tony Vega 03:49

So here we have an ambitious young kid with a passion for fish in front of the world's leading ichthyologists. What happens next? Well, not surprisingly, the ambitious young kid goes searching for new species of fish in order to impress the world's leading ichthyologists.

Dr. Richard Pyle 04:06

Every time I came up from a dive, sure that I had seen some fish that nobody had ever seen before, and I described it to him or collected a specimen and showed it to him, he said, "Oh, yeah, I know that when I discovered that one 30 years ago," or you know, you'd have some story behind it.

Tony Vega 04:19

Dr. Pyle's inability to discover any new species of fish led him to conclude one thing: he had to dive even deeper.

Dr. Richard Pyle 04:28

So regular scuba, which we are using at the time, generally you don't want to go much below about 100 or 130 ft, that's generally considered the limit for scuba. Jack would probably go down to 150, 180 ft, maybe even 200 ft sometimes. And I realized I had to go deeper than that if I was going to find something he hadn't seen. So that period of time where I was diving with him every day, I kept going deeper and deeper and deeper, you know, 200 ft, 220 ft deeper and deeper, using regular scuba gear, and looking for things that I had never seen before - new fishes that I'd never seen before. I'd found several of them, and I brought them up, and I showed Jack and I said "Look at this, this must be a new species." "Oh no, no, I found that one," you know, some story about how when he found it. So towards the end of his visit, we were diving in a place called the Blue Holes in Palau, which is my favorite dive site on planet Earth, it's this spectacular cavern system with these giant chimney holes that go up to the top of the reef that all join together in a huge cave, down at the bottom. And about 90 ft at the roof of the cave and maybe 120, 130 ft on the floor of the cave. But outside the cave, it was a vertical wall that just sort of sloped out into the abyss.

Tony Vega 05:46

This was the opportunity Dr. Pyle had been waiting for! This was the chance for him to prove himself. This was the chance for him to find a fish that no one else had ever found. So Dr. Pyle dove deeper. And deeper. And deeper.

Dr. Richard Pyle 06:04

If you're not a scuba diver you may not know this, but breathing air at those depths you get what's called nitrogen narcosis. It's a, it's similar to alcohol and inebriation, the deeper you go, the higher concentration of nitrogen, which is an air that we breathe, the, the more you get inebriated. And just as you don't want to drive drunk, you don't want to dive drunk. So it was kind of a toxic mixture of me not being able to think straight and being precariously deep on very, very deep-for-regular scuba gear, you know, scuba divers should not go anywhere near that deep. But I was possessed with, you know, the, the quest of finding something Jack hadn't found before. And sure enough, I got down there, I saw these fish that looked like they had black and white stripes on them, and I thought surely he's never seen this before.

Tony Vega 06:50

Dr. Pyle managed to catch a couple of the specimens that he spotted, and then he began heading back up. But that's when he realized that not everything was going as well as it seemed.

Dr. Richard Pyle 06:59

As I started coming up from 250 ft, I got to about 200 ft and took a breath out of my regulator and it felt a little stiff, like a little hard to breathe and I thought that's weird. And by the time I was up at 180 ft, it was like trying to breathe through a hypodermic needle. And I looked at my pressure gauge, is, you know, and the gauge said that I had plenty of air. And, and I thought "What's going on? Why can't I breathe?" And as I kept coming up harder and harder to breathe, suddenly the needle on my pressure gauge instantly dropped to zero, it had apparently been stuck. Probably because I was so deep, the water pressure was pushing down the face of the gauge and locking the needle in the wrong place. So unbeknownst to me, I had been consuming all of the air in my tank without realizing it, because the needle had been stuck at a level that showed plenty of air to breathe. So now it's like 180, 150 ft and I can't breathe anymore. So I basically had to scramble, bolt to the surface as fast as I possibly could to not drown.

Tony Vega 07:58

Dr. Pyle is short on air, and he's seen stars, but he manages to break the surface, he manages to breathe again. And then his first thought is, "I have to show Jack these fish I caught."

Dr. Richard Pyle 08:11

So I climbed into the boat and started showing him this fish. And I said, you know, "This has to be a new species!" and I reached into the bucket and the black and white stripes and now become red stripes on a yellow background because of the color differences down deep, they had looked black and white to me. And once I saw they were red and yellow, I thought "Wait a minute, that looks a little familiar." And he said, "Oh yeah, I know that fish should Pseudanthias lori, I named it after my daughter because I discovered it on her birthday." And you know, he had the same as before, so I had not found a new species of fish. Now if you're not a diver, even if you're not a diver, you've probably heard about decompression sickness or the bends. And the way you get that is if you go down too deep and you stay down too long, you absorb lots of dissolved nitrogen in your body. And if you don't allow time for that nitrogen to come out of your body, then it will go somewhere, and where it goes is creating bubbles inside your body, and those bubbles will block your blood vessels and get trapped in your spinal cord and you know, it could kill you, it can make you paralyzed and can do all kinds of things. So normally, when divers go deep, especially as deep as I'd gone, you have to decompress. And what that means is you don't come all the way to the surface, you come up slowly, stop at a certain depth maybe 100 ft, wait a couple of minutes, and then move up to 90 ft, and then 80 ft, then 70 ft over the course of an hour or more, sometimes two hours, depending on how deep you went and how long. Of course I didn't do that on this dive, I just rocketed straight to the surface, I did the absolute worst thing one could do after doing a dive like that.

Tony Vega 09:45

Shortly after showing Jack the fish he had caught, Dr. Pyle began to feel a pain in his thigh.

Dr. Richard Pyle 09:51

Now if you're a trained diver, you know that the classic symptoms of decompression sickness or bends are pain in your joints - like your elbows and your shoulders and your knees. And then also neurological pain, like numbness, or paralysis, or you know, other problems with your balance. And so it didn't immediately strike me as being decompression sickness because it was right in the middle of my thigh. And then my other thigh started getting the same pain, and I thought, well, that's odd. And then my knees started getting painful, and then my shoulders, and then my elbows. And then I knew right away okay, this is what they've always taught me about in dive school, it's the bends I better get back in the water.

Tony Vega 10:33

Dr. Pyle spends a few minutes at about 60 or 70 ft and while down there, he notices that the pain he was feeling in his joints was starting to go away.

Dr. Richard Pyle 10:43

So then I spent the rest of that scuba tank slowly coming back to the boat. And of course, I had told Jack what was happening and he said, "Get back on the water." And you know, he was shepherding me. He jumped in the water, too, and he stayed with me, and he was photographing fish, but he stayed with me. And I came up and did my decompression. I spent about an hour underwater. The final part of that was right beneath the surface at about 10 ft, which is what you do when you decompress. And then I got back out and then I felt a little bit of pain, so I got back in and spent a little bit more time on the bottom, not on the bottom, but 20 ft below the boat and slowly finished some decompression.

Tony Vega 11:21

It looked like Dr. Pyle had just had a really close call. But after finishing his decompression, all seemed good - they had lunch, talked about fish, and went on with their day.

Dr. Richard Pyle 11:34

So everything was fine. And then it was the last day of diving for Jack, and he said he had one more fish, he wanted to catch at a different reef on the way back home, and he asked if we could stop there and try to catch this fish. And I said sure, no problem. So we went to this other reef, got all set up. By that time, we had used up most of our scuba tanks, we each had only half a scuba tank left. And so, because we only had half a tank, the fish Jack wanted to catch was about 130 ft deep as I recall, and so his plan

was to go down by himself, find the fish, put a little chemical and anesthesia to knock the fish out, come back to the surface. Then my job would be to go down and catch any of the fish that were starting to succumb to the anesthesia and take a few specimens of it, because I was an aquarist, and I wanted to try to bring some of them up alive, and the best way to do that is catch them early in the process. And then as soon as I came up, he would go down and finish collecting all the specimens he wanted to collect. So we did this sort of staggered dive, where we weren't down together,

Tony Vega 12:38

Jack goes down and then comes back after about 10 minutes. He tells Dr. Pyle "Go straight down, you're going to see a big sea fan. Then make a right, and then after about 10 feet, you'll see my spear gun. That's where you should go looking for fish.

Dr. Richard Pyle 12:54

So I went straight down to the sea fan about 130 ft, turned left, because I'd forgotten he said right, swam for quite a ways, no spear gun and I thought "maybe he said right," so I swam back to the big sea fan went the opposite direction found his spear gun, found a couple of the fish that we were looking for, managed to collect a couple, but by that time I blown up a lot of time, and I'd sort of forgotten that I'd started to die with only half a tank. And here's where the sheer stupidity comes in: I kept looking at my gauge and my gauge kept saying "Oh, you got plenty of air." not remembering that just on the previous dive the gauge had failed me. And so I start heading back up and sure enough, starts getting hard to breathe, sure enough, I look at the gauge, the needle pops instantly to zero once again, I skyrocket up to the surface.

Tony Vega 13:43

By this point Dr. Pyle had been underwater for about 15 or 20 minutes, far longer than he was supposed to.

Dr. Richard Pyle 13:49

As soon as my head broke the surface, Jack was in his gear ready to jump in and come find me and he says "Where the hell have you been? Get back down and finish your decompression right now." And then he jumped over the side and went on down. And I didn't have any air left, and I didn't have time to tell him that. So I thought well, whatever and I got in the boat. And then, while I was waiting for him to be down there, about a minute or two later, the boat rocked a little bit, and I was standing up in the boat and I reached to put my hand on the console to balance myself and my hand did not go where my brain told it to go. So in my mind, my brain said, Put your hand on the steering wheel of the boat, and instead my arm crossed over about 10 inches to the right of the steering wheel. And no matter how I tried to make my hand go where my, I wanted it to go, it kept going to the wrong place, which is an

experience I'd never had before. And then I tried my other arm, and the same thing. And then I started seeing stars, and then I started feeling numb all over my body. And I knew instantly now I had the bends again but this time much more serious than pain in my joints, this time I knew it was really, really bad because often the thing that comes after paralysis is death, if you're not careful. So the first thing I did was I laid back down on my, on the boat, on my back and put my feet up on the console. Now I'm not sure there's any real wisdom to that, but in the old days, they used to teach us that what you do when you have decompression sickness, lie down with your head down and your legs up. And the theory was the bubbles would all go to your feet. And the fact of the matter is, that's not how it works, so that was not good advice. But it turned out to be unexpectedly the right thing to have done because what I believe was happening, based on my symptoms, is that, my circulatory system, my, my blood system wasn't working properly and my blood pressure was falling dramatically. And so probably the reason I was getting lightheaded and dizzy and seeing stars was I wasn't getting enough blood to my brain. And by lying down, the gravity didn't help, in fact help with the blood getting back to my brain, so brain. So as I was laying down on the boat, the symptoms went away.

Tony Vega 15:57

For the moment, it seems like the situation has stopped getting worse. But Dr. Pyle understands that he needs to get back into the water to decompress. So he takes this as an opportunity to grab his regulator and start checking the scuba tanks to see if any of them still have air.

Dr. Richard Pyle 16:14

And only one of them had 500 psi, which is just a small amount of air left, actually, I think was more like 300 psi, it was mostly empty, but there was at least some air in there. So I put the regulator on, I didn't bother putting it in a backpack or anything, I didn't even grab my fins, I just grabbed my mask, and as I put my mask on my face, the glass fell out of my mask onto the deck of the boat. And so this was significant, because I didn't want to get in the water blind without being able to see so I thought I got to get my mask back together again. So I picked up the glass and tried to reassemble it with my hands, and by this time My hands were starting to lose function again, and that's why I knew Okay, this is serious. And I, I was trying to overcome my uncoordination in my hands and delicately get this mask put back together again, which, you know, while trying to fight off panic and everything else. And I did manage to get the mask put together again, I put it on my face, and I forgot to grab a white belt, I just put the tank under my arm to breathe from the regulator, rolled over the side of the boat and tried to pull myself down the anchor line. But I didn't have a weight belt so I was a little bit too buoyant, and I couldn't get down, and I ended up using up all the air before I got any meaningful time in the water.

Tony Vega 17:25

Having run out of air, Dr. Pyle had no choice but to get back in the boat. He lied back down and put his feet up again, in hopes that maybe that would keep the situation from worsening. It was a little bit after that that he began to hear the sound of bubbles coming up to the surface of the water.

Dr. Richard Pyle 17:42

And then a few minutes later, I hear Jack's bubbles, which means he had come up to do his decompression underneath the boat. And I get to hear his bubbles, you know, breaking right next to the boat, and I thought okay, should I go tell him what's going on? Should I ask him to share his air with me? I know he started his dive with only half a tank and this was already a second dive on that half a tank, so I didn't think he'd have a lot of air left. And I debated and I debated and I thought well, I better let him know just that I'm having this problem. So I put my mask back on again - again no fins, no weight belt, anything, no tank this time - jumped over the side of the boat, pulled myself down the anchor line, got his attention, and I thought okay, I'm holding my breath, of course at this point, and I'm thinking, How do I explain this complicated situation to him. And so I pointed at my shoulder, and Jack had known what I'd been through early in the day, and even though the symptom on that moment wasn't my shoulder, I thought by pointing at my shoulder, he might get the idea. And he instantly got the idea and he stuck his regulator in my mouth and he said "You stay here!" And so we both sat there breathing his one supply of air, holding our breath as long as we possibly could.

Tony Vega 18:55

So the two are sharing the same tank. But there's a problem. Dr. Pyle still doesn't have a weight belt, so he keeps floating to the top.

Dr. Richard Pyle 19:04

At one point, I took a big breath from the regulator, pulled myself down to the anchor line to the bottom and grabbed a big rock and shoved it in my pants just so I would have something to help keep me down. And so Jack and I just dragged that tank out for as long as we could, which was only a few minutes, we only got 7 minutes I think at 10 ft deep, which after what I had just done is nowhere near enough decompression to solve that problem. But it was all we had, it was all we could do.

Tony Vega 19:36

Jack and Dr. Pyle used up the last tank of air that they had, so what they had to do now was get help. We'll get to that part of the story after the break.

Tony Vega 19:54

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Tony Vega 20:56

When we left off, Dr. Pyle and Jack were still in the middle of the ocean, and they had just depleted the last tank of air that they had. Dr. Pyle was still dealing with symptoms from decompression sickness, so they knew they had to head back to land and seek help.

Dr. Richard Pyle 21:10

I quickly pulled up the anchor and started the boat, Jack said "Get back to shore as fast as you can, we got to get to the dive shop before it closes, we got to get more scuba tanks, we got to get you back in the water." He was worried about himself because I was using some of his air, so he had to cut his decompression short. So we were both in a precarious situation at that point. So we start tearing off to the dive shop, which thankfully was not far away, it was a fairly short boat run. But there are two ways to get to the dive shop from where we were. One of them is through the normal marked channel boat channel, and that would have taken about 15 minutes. But there's also a secret shortcut, if you know the reef really well you can go as shortcut, it's not marked, but you know how to avoid the reef, you can get to the dive shop and maybe six or seven minutes so I said time's of the essence, I started heading for the shortcut I got to the entrance of the shortcut, and this rain squall came out of nowhere, I couldn't see anything I had to put my mask back on just to see while I'm driving the boat, and you know, narrow limits and coral heads, so it ended up taking 15 minutes to get to the dive shop anyway, because I had to go so slow, because I couldn't see where we're going.

Tony Vega 22:17

Despite the complications with the weather, they make it to the dive shop just in the nick of time. Francis, the guy that runs the shop, is in the process of closing it and was just about to leave, but they managed to catch him. Unfortunately, that's not where the story ends.

Dr. Richard Pyle 22:33

As I pulled up to the, the dock of the dive shop, I called out to Francis saying I need more scuba tanks. And as I pulled up to tie the boat off, I took one step and I collapsed on the boat, my legs were no longer working anymore. I had been standing, holding on to the steering wheel of the boat driving it so it didn't notice it until I tried to walk, and as soon as I tried to walk, I realized I couldn't walk, I was I, basically my legs were completely uncoordinated. So Francis loaded a bunch of tanks in the boat with a bunch of help from his guys, and he drove us out to the spot where we jump back in the water. And Jack and I did essentially our fifth dive of the day, whatever it was, and I went down to about 80 ft and to see if my legs would start to feel normal again, they didn't. Whereas the previous times as soon as I got in the water, the symptoms went away immediately this time, the symptoms were not going away. And I didn't want to stay too deep too long, because that would make potentially the situation even worse. So I waited a few minutes down at 80 ft, hoping the symptoms would go away. When they didn't I started working my way up 60 ft, 40 ft, 30 ft, and then I just spent the next several hours at that 20 ft, right below the surface, breathing air.

Tony Vega 23:50

As Dr. Pyle was getting back in the water, it was getting dark, the sun was setting, but Dr. Pyle would go on to spend maybe three, maybe four hours, maybe even a bit longer down there. When he would look up, he could see people communicating, he could see flashlights, he could see boats coming and going, but he just had to stay there underwater, waiting and hoping.

Dr. Richard Pyle 24:13

So at this point, it was like 10 o'clock at night or something like that, 11 o'clock at night and, and I was just exhausted, it was getting to the point where I couldn't even stay awake underwater. My symptoms had stayed the same the whole time, which is good and bad, it's bad in that they didn't go away, but it's good in that they didn't get worse. And if I hadn't got back in the water, I suspect they would have continued to have gotten worse, and I suspect I would not be able to walk today, I think I would have been permanently paralyzed or worse. So I think getting in the water didn't solve the problem, but I think it bought me some extra time. And what was happening during those hours that I was just sitting shivering in the cold dark water was they were getting the decompression chamber ready - they had a decompression chamber at the hospital in Palau and they were getting it all set and ready to go. And it wasn't a very good chamber, it was small, it was like maybe 5.5 ft long on the inside, they call it a steel coffin because really you have to kind of go into it folding your arms up, and it was a little shorter than I was tall, so I kind of had to crunch up. And they sealed me up inside this giant tube, this steel tube, with one little porthole in it, and then with a whole bunch of scuba tanks started pressurizing this, this chamber and it pressurized me down to some depth, I don't remember the exact profile they followed for decompression in the chamber, but I was in there for eight hours.

Tony Vega 25:36

When he arrived at the hospital, Dr. Pyle says that he still had control of his legs. He remembers walking about 15 or 20 ft from a chair that he was seated in into the chamber. He was barely able to do this, it took some concentration, but he was able to walk. However, when it came time to exit the chamber, things were different.

Dr. Richard Pyle 25:57

Eight hours later, when I came out of the chamber, I couldn't move my legs or my arms at all. Now at the time, I don't think it was necessarily the case that I got worse because of the chamber, I think the chamber probably played a very critical role in the fact that I can still walk today, it probably saved my life. But I did come out of that chamber in worse shape than when I went into that chamber. I was essentially quadriplegic at that moment. And at the time, I didn't really worry about it because I was so exhausted. This was like already, you know, the next morning practically, and I had been up all day diving and of course, they can't let you sleep in the chamber, you're in there all by yourself. And so I just fell asleep, I didn't even, they didn't even get me to the bed where I was going to be sleeping in and I just turned off the lights. And I don't know how many hours I slept, it was a very long time, but when I woke up, probably 15 hours later, I couldn't move my arms or legs, I was just sort of in the bed there. And that was a period of time of wondering, okay, what happens now. And so I got through that day, they made a whole series of arrangements, I ended up flying to Guam, where they had a better chamber facility, and I spent a couple of days in Guam being treated in their chamber. But the main decompression doctor was not on Guam at the time I got there, so they arranged to fly me back to Honolulu, where they have an even better recompression chamber facility. And I remember they, the only plane they could get me on was a C-5, I don't know if you're familiar with military planes, but a C-5 is the largest production plane in the world, it's bigger than a 747, it's sort of a three story container, and I was the only thing in this, it was like being inside a, like a volleyball gym or something, and I'm just this little guy lying off in the side in this flying gymnasium practically, which was a weird experience unto itself. And it took 10 hours, which is longer than normal to fly to Honolulu because they had to fly at low altitude and maintain cabin pressure at one atmosphere inside the plane. Because if they elevated to a higher plane, you know the symptoms of bends would have gotten much worse. So I owe the US government, the US military, I don't know how many hundreds of 1000s of dollars for getting me off of Guam over to Honolulu.

Tony Vega 28:21

Once in Honolulu, Dr. Pyle says he spent every day for about a month going in and out of chambers. And thankfully, it appears that the treatment did help because his symptoms did improve.

Dr. Richard Pyle 28:33

By the end of that month, I could walk with a walker, you know, and I could sort of hobble around and get in and out of bed. Obviously I couldn't walk normally at that stage, but at that point, there seemed to be diminishing returns, that is it got to the point where the risk of continued decompression chamber treatments, because they do carry some risks, things can go wrong and things did go wrong a couple of times, fortunately not causing permanent damage, but we decided to end the chamber treatments. And so from that period forward, it was about a year before I could walk without a cane, another couple of years before I could walk and not obviously show a limp. And I would say I continued to feel mild improvements at a slower and slower pace for about 10 years. I can't say whether I got improvement after 10 years or not, because by that time it was so gradual and so long that it's hard to tell whether I was getting better or not, but to this day, I have a certain level of symptoms, those include the fact that one leg is a little more numb than the other, and by now I mean it's not that I can't feel this, it's not like when you get a shot at the dentist and it's novocaine what it is, is I can feel an ant crawling on my leg, I can feel a feather touching my leg, that's really easy. What's messed up about my legs is I don't feel sharp pain, if I step on a thumbtack It feels like stepping on a marble to me which is weird. And then I can't distinguish hot from cold, I can tell it's either hot or cold, I just can't tell which - so you could put an ice cube on my foot, or you could put a hot coal on my foot, and I would know it's something bad, but I couldn't tell you which of the two it was. So those are symptoms that are still with me all this time later. I'm also, don't have the best balance, I never could dance, now I have a good excuse of why I never will be able to dance, but I still do stumble, sometimes I still do shuffle my feet sometimes, if I'm in a boat, and the boat rocks, I'm more likely than anyone else in the boat to need to grab on to something, so I have these subtle reminders, which I think are a good thing because I continue to my diving career and having those reminders allows me to remember what the potential consequences of this stuff are, if you get cavalier about it, if you get, you know, too cocky about it, if you get too self confident about it, it can sting very, very badly. And so those reminders are helpful, helpful for me on every dive I make, just to allow myself, "Okay, you know what, I'm gonna do another 15 minutes of decompression just because," you know, and I'm often the very last person out of the water, I'm often the one who's ready to leave the bottom before anyone else. And so even though I continue to deep dive, I do it in a very different way with very different kinds of equipment, completely different paradigm, but I'm still very, very aware of the consequences of what might happen to me if I make the same mistake again.

Tony Vega 31:38

Not surprisingly, Dr. Pyle's doctors didn't want him to get back into the ocean. They suggested that maybe he go into a different field, perhaps physics something that was adjacent to the ocean, but wouldn't actually involve him going deep underwater looking for new species of fish. So Dr. Pyle considered physics, he thought maybe he could design new equipment that would help other people do that sort of thing. But in the end, he decided that he had to follow his passion. So he stuck with biology.

Dr. Richard Pyle 32:08

I would love to have been an engineer, too, but everything good in my life has come from that decision to follow a path of biology. I met my wife in graduate school, I met you know, my kids wouldn't exist if I hadn't met her. Everything good in my life has come from that decision I made and which ultimately came from that accident I had. So even though it should have been the worst day of my life in Palau getting paralyzed, was actually the best day of my life, because it led to this cascade of events that put me where I am now and I'm very, very happy with how it all turned out, I wouldn't change a thing of how it all turned out.

Tony Vega 32:39

Now, given all that Dr. Pyle just explained, you can't help but wonder if, after that, he was frightened at all to get back in the ocean. The short answer is yes.

Dr. Richard Pyle 32:51

But after I made the decision to be a biologist, again, I thought, you know, I'm gonna keep diving. So I committed myself for the rest of that year to learning everything I could about diving physics and physiology. I had actually learned a lot every day when I was being treated in the chamber because I was talking to the doctors every day, and I'd be asking questions like, how does this work, learning so much more about the physiology of diving and decompression sickness that they never teach you in scuba school when you get certified. And so I got very deep into it, I bought all the classic textbooks and just poured over them and really started learning until the point where I felt comfortable, I understood the, as much as was understood at the time, what the physics and physiology are, and I made a calculated risk that I think I'm ready to start diving again. And I waited till almost a full year after, after the diving accident, before I started diving again. And the first thing I did was very, very shallow, you know, very conservative, and I spent several years gradually, you know, being super hyper conservative on every dive I did, super shallow, not getting close to decompression limits or anything. And it took several years to get to the point where I started feeling comfortable doing deep dives again. And only as I continued to learn more about the physics and physiology, only as I started learning about breathing mixtures other than air, Nitrox and dry mix and helium and high tech equipment like rebreathers, it was only when I really got deep into that that I felt sort of comfortable about, at least I didn't actually have access to that technology, but I was understanding of it before I got back into deep dive.

Tony Vega 34:32

So how was it the Dr. Pyle ended up at Bishop Museum? Well, Dr. Randall, or Jack as we've been calling him, had something to do with that. But if you want to hear that story, you're gonna have to come back

for part 2. We're also going to be talking about Dr. Pyle's research in coral reefs, so definitely don't miss that episode. In the meantime, if you want to find out more about Bishop Museum, just visit BishopMuseum.org. And if you're thinking about visiting Hawaii, definitely pass by Bishop Museum.

Tony Vega 35:03

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