

Bill Howard

Beneath the Surface of San Diego: A History of Perspectives & Innovations At Depth

24 May 2014

**Oral History Recorded by:
Ashleigh Palinkas**

Ashleigh: I was thinking maybe, if you wanted we could start off kind of following the format of these questions and then maybe afterwards we can look at some of the photos and you can talk about the photos and we will put that on the tape too.

Bill: Yeah.

Ashleigh: Cool.

Bill: Sounds good.

Ashleigh: So, you ready, ready to go? Here's some water for you as well, if you would like. Okay, so the date is, it is Saturday, May 24th. I am Ashleigh Palinkas here with Bill Howard at the Scripps Institution of Oceanography. Bill, were you born in San Diego?

Bill: In Pasadena, California.

Ashleigh: And when did you come to San Diego?

Bill: 1951, summer.

Ashleigh: How old are you?

Bill: I'm 75.

Ashleigh: So we will do that math.

Bill: You want the birth date? September 1, 1938.

Ashleigh: Do you remember the very first time you wore a mask in the ocean?

Bill: Yes.

Ashleigh: Where was it?

Bill: It was right in front of the Marine Room¹. We had a house on the corner on

¹ La Jolla, CA

Paseo Dorado that was adjacent to the parking lot there for the Marine Room. And I had been wanting to dive for maybe a year. I was in the eighth grade and every day after school I would walk up by the Skinster dive shop²-- it was a sporting-goods store back then-- and look at the equipment in the window. But I was shy and didn't know what to do, so I didn't do anything. I'd also go to Scripps aquarium, because we lived here at La Jolla Shores. So I'd walk up to the aquarium and look at all the fish. And I collected tropical fish prior to that for several years and I still have tropical fish. So I was always interested in fish. My nephew-- not my nephew, my cousin-- came down to spend a week with me and he talked to me about, "What can we do" and "What are you interested in?" and I said, "well I'd really like to go in the water" and he says, "well why haven't you?" "I don't have a faceplate."

He said, "But what do we need to do it?" So we needed a faceplate, snorkel and I don't know if we got fins or not, but we went to the shop and got them. And I went diving out there and I never stopped. He was there for the weekend and we would go out every day. Then after, that I would go out kind of alone and one of the things I remember from those dives was at about 4:30 in the afternoon the leopard sharks would come in. Nothing like what we have now. Back then, there would be one or two big ones. And no little ones. I think probably from the netting that was done, not too many survivors, but the ones that did survive were larger. And they'd come in probably looking for mates or something. But that's the time of year because it was August, my first diving. So it was August of 1952 would be the first time I got in the water because I had just graduated from the eighth grade, Stella Maris in La Jolla. And they would scare me out of the water.

Ashleigh: The leopard sharks would?

Bill: But I wanted to dive so much that I'd go in then next day until they came in and I get back out.

Ashleigh: 4:30 you are out.

[Laughter]

Bill: And for my birthday, which was September 1st-- I'd only been diving for at most four weeks-- my dad surprised me with an arbalete. Prior to that I had built a five-prong and we used to get the little round rays. We only speared a few of those and then I lost interest because you couldn't do anything with them so wasn't a good idea. But once I got the speargun, then I ventured further into Devil's Slides³ and back then you could be shooting fish in that, it wasn't a reserve. And I became a better diver and then I learned about the Children's Pool⁴, which we called the Casa. And I'd go there during that winter and the water was really cold. And there was no

² Bill Towle's Sporting Goods Store. Oral History: Frank Leinhaupel, recorded with Ashleigh Palinkas, 26 February 2014.

³ La Jolla, CA

⁴ La Jolla, CA

wetsuits at that time! I'd go in the water and I'd spend about 20 minutes and have to come out and then I'd shake really badly. We did a lot of our diving—well, I started making friends around that time, but I think that particular winter I was still diving mostly alone. Then when abalone season started which was in March, I think, I thought I would give that a try. I went over to the caves and was going to dive there alone again. And there were two boys a year older than me that were diving there. And they started talking with me and we started diving together and one of them eventually married my sister.

Ashleigh: Really?

Bill: The other one is Bob Shea, and he's still a good friend. He became a commercial abalone diver after he was a lifeguard captain and when we were in high school he got a scholarship to I think up in San Francisco, I'm not sure if it was Loyola, or if there is a University of California San Francisco in Art. And at the very last minute he chose not to do it because he was a, I don't know if he was a junior lifeguard at that time out of high school, or a lifeguard, but he decided he didn't want to leave the ocean. And we were, even though he was a year older than me, we were in the same class, the same year. So we had both graduated from high school at that time. So I went back to Notre Dame and he stayed here with the ocean. But I always did my diving on vacations and the summers in those years.

But getting back to that first dive, the one for abalone where we've made good friends. Then we'd go together a lot from then. We'd looked towards making spear guns that were stronger, bigger, because the Bottom Scratchers had made these wooden guns and so you could look at them and understand how they were made. And I remembered making, trying to make the first one. And I guess I did things all on my own without asking my father for help. So I got his woodworking drills and tried to drill stainless steel and ruined all of his woodworking drills. But we finally got the steelwork and got a spear gun that would work. And I remember diving off of hospital point---that's the place you met us the other evening⁵. We had a paddleboards by that time. That was something else my father got me, I guess. I wanted a paddleboard and he located a wooden paddleboard. I had it while we were there at La Jolla Shores. And we went out, we were diving out at the kelp beds. We had heard about these men from Long Beach, they were called a dive club, called the Long Beach Neptunes, and they had speared a big black sea bass in that area. So we went looking for them and we found them. And it was remarkable. We'd get out there at something like seven in the morning. On the inside, head for the kelp and then we put the faceplate on and looked over the side of our paddleboards and just paddle around a little bit. And you didn't have to go very far before you'd find these big black sea bass sleeping under the kelp at about 10 to 15 feet down. And then we'd kind of paddle over to the other side of the kelp paddy that they were sleeping at and load our spear guns. And then go over the side and try to shoot one. And they'd just bounce off. Yes, well that's the guns that we had at the time. They were too weak.

⁵ Bill and many other Addict's Dive Club members still meet here weekly in the summers; Ashleigh has joined in the meetings since her first visit.

Ashleigh: So these are the guns that you made later? Or with the arbalete still?

Bill: Well my friend Dave Lynn who eventually married my sister, he had an arbalete and I had my homemade gun. I don't quite know why it didn't have enough power to penetrate but I finally figured out that if I shot them, shot more from behind I had better luck and I went sort of under the scale, between the scales and penetrated the fish and I had my line tied to my paddleboard maybe 40 or 50 feet, I don't know how long. And I remember jumping up on my paddleboard and getting up to a good speed and then slowing down and he had broken off. He had broken the line, I think. Typically at that time the line would break just where you built the split-tip and you didn't smooth the inside enough. If there's enough tension it could tear the line. And then my, Dave Lynn, he came up with the idea of shooting a small one to get something and shooting it in the eye. And he did that. And that one he landed. And what happened with that is it went down to the bottom, deeper then he could dive and got tangled in the kelp. I don't know why, because I could dive deep I think at that time. Maybe we didn't have knives to cut the kelp, but I know that I was not involved in getting that fish loose. We saw a commercial abalone diver boat coming by and Dave knew that young man who had been at La Jolla High School where Dave went a few years before and he went down with his hookah rig and cut the fish loose and we brought it up and I have a picture of it here to show you later. With the two of us holding it up.

Ashleigh: Awesome!

Bill: And this was happening early on in the year when school had started. And I was supposed to be at St. Augustine's High School probably a freshman, or no, that would be a sophomore I guess. And so we were rather, I was rather late getting to school that morning.

Ashleigh: Yeah.
[Laughter]

Bill: But that was an interesting story.

Ashleigh: What happened to the fish? Did you end up eating it?

Bill: I'm sure we did but I have no idea. That's too long ago.

Ashleigh: Yeah.

Bill: I noticed from your list of questions, you did ask if we eat fish and what we like for fish and stuff like that.

Ashleigh: Right.

Bill: Yeah, we did not want fish to go to waste.

Ashleigh: Of course.

Bill: And when you are a skin diver you don't need to spear every fish you see. So we'd do a lot of diving just looking and learning where fish lived and then maybe at a later date you'd go back and get that fish. Because we tend to be very competitive. If you do see a fish of a particular species that is larger than you've ever gotten before, or significantly large, you would spear him on the first time you had a chance. And that wouldn't cause enough fish to be in our parents house that we couldn't eat it all.

Ashleigh: Right.

Bill: As far as fish that I liked, the sheephead was probably the fish I like the best because it was bland, and later on when I was raising my children a bland fish would fry with a good egg batter. They thought that was really wonderful. So that was my favorite fish then. As I got older I started eating opaleye which is a very strong tasting fish. And when you're older, at least for me, the taste changes a bit. It wasn't like a favorite fish, but when I was young it was considered a trash fish.

Ashleigh: Yeah.

Bill: And that would be something I'd give to people, whoever would take it to have them. And now that I do not spearfish my favorite fish is salmon. And it's a wild salmon. But that's a different story.

Ashleigh: Did you ever scuba dive?

Bill: I guess the answer is yes, but almost never.

Ashleigh: Okay.

Bill: At one time I was preparing to go to the national diving meet in, I think it was in Seattle, Washington. And Vern Fleet, who was an instructor on scuba-- and he's in our dive club-- said I should get checked out so that I could scuba dive if it was important up there during the scouting. And since I was very experienced in the water the Diving Locker had a program for, they called it a "mossback certification" for people who knew what they were doing so that they didn't really have to go to the class. I still had to read the book and take the exam. And that was fine. And then I had to have a checkout dive and Vern was an instructor and he came to my company, General Atomic, at the swimming pool there one day and brought tanks and checked me out. So that's how I got my certificate. The only time I remember diving with tanks, almost for sure, was two different trips to the Cortes Bank. That's deeper water. And it's a boat trip and they have all the tanks there. Mostly it was for lobster, and we'd be diving from 30 to 70 feet of water and staying on the bottom the whole time. And so I did my tank diving there, got lobsters and in between the dives, on the second trip I went on, I went free diving while they were filling the tanks and I'm not sure if they had some program where you were supposed to stay out of the water a half hour or an hour or something between tanks.

Ashleigh: Yeah, a surface interval, to decompress...

Bill: Well my surface interval was free diving first and I was spearing sheephead and I got a big about 10 pound sheephead.

Ashleigh: Wow.

Bill: Free diving out there and I was kind of proud of that. And then I wasn't happy when it was time to clean them on the trip back because it was a lot of fish to clean.

But similar to SCUBA diving I did hookah diving. And that was-- my junior year of college, that summer I worked as a commercial abalone diver out of the harbor of Santa Barbara. And we worked the Channel Islands and hit I think pretty much every island. Even made one trip out to San Nicolas Island and spent a week out there. Spent a few days at San Miguel Island. A little bit of diving at Santa Rosa, a little bit of diving at Santa Cruz, I think is the name. And then a lot of diving at Anacapa. Anacapa I think is a reserve now. That was a very good place to get pink abalone. And the scuba, or the hookah rig that we were using had a faceplate mask without a regulator there. So, the hose just came down to your belt and there was like a garden hose faucet that would regulate the air. It just free flowed past your face. So because of that it did not produce enough pressure and volume to go past about 40 feet of water. And that is why Anacapa worked out real well for us. Because the pink abalone were in 30 to 40 feet of water mostly. And also those-- at San Nicolas, we did real well on red abalone because of my experience in free diving I checked out some shallow water reefs that some of the other commercial divers hadn't bothered to check out. And I got into real good abalone in probably 20 feet of water. The other thing I remember about diving out there was there was a swell running and that swell would pick you up and move you 25 feet that way and then 25 feet back and you had this big bag that you would put your abalone in and it just didn't work. So you would set your bag down in one place-- the water was so clear you could venture away from it and get a handful of abalone and then bring them back and put them in. And one time I remember, oh-- and the other thing with that bag, if you were away from the bag very long, the sheephead would come and try and eat the abalone so you had to be careful and face them all inwards. But one time I was taking an extra length of time to try to find enough abalone to come back and then when I came back a number of my abalone had crawled out of the sack-- because you just had an open ring at the top-- and had migrated away from the bag and they were on the order of 10 feet away in a circle. They, you know, had picked random directions to go, that was so impressive. But they were easy to scoop up because of the flat bottom and put them back in the bag. We were young-- well, college kids-- and not too experienced with what the other commercial divers were up to. And we were afraid they would find our spot and so we decided not to go back there the next day. And what was totally wrong in that idea was they had known where we were. They saw that we had a good catch, so they went there first thing the next day and they cleaned out the abalone that we could have gone back first thing that day and maybe they would have respected us and stayed a little bit away from our reef. So, that was a real learning experience.

Ashleigh: Right.

Bill: And so that fits in with the commercial diving. Oh, more of the hookah diving. After I graduated from college and graduate school I got myself a skiff and rigged it up with a hookah rig and this time I had the regulator you know, in my mouth, so I could dive deeper.

Ashleigh: And about what year was that that you bought the skiff?

Bill: I probably hooked up this rig in about 1967, '68, around then. And Santa Barbara would have been 1957. So I had a big spell sort of in there that I was not commercial diving. Well, I know this is more free diving conversation, but my experience is both. And so, let me finish up.

Ashleigh: Yeah, sure, it all stems from sport diving, so it's all very relevant.

Bill: To parts of that commercial diving. After spending that summer up there in Santa Barbara then I went back to Notre Dame. I was graduating as an engineer. I did not know what I really wanted to do as an occupation because I loved the ocean and I was torn between being a commercial diver and being an engineer. So I decided to go to graduate school because that way I didn't have to make the final decision.

Ashleigh: Yeah, that's what brought me here!

Bill: I think the president at that time was Eisenhower and the Cold War was going; they were passing out fellowships pretty freely. So I was able to qualify for a fellowship there at Notre Dame. And that paved my way and I could be independent of my father at that point. And so instead of being an engineer that summer I was an ab diver. And as an ab diver I didn't have my boat and I wanted to be in La Jolla and there was a young fellow that just graduated from high school named John Collins and he was a real go-getter. He later had a successful real estate business and his wife still runs it, but he died in a plane crash, flying his own airplane and I think fell asleep. Coming back from Alaska. But, getting back to that here I am a graduate engineer working on the boat of the graduate high school kid. But I got chosen because he knew that I had the experience. And we would dive off of La Jolla and we'd dive in about 90 feet of water and spend about an hour, whatever the Navy tables had, it might have been 50 minutes at 90 feet that you did not have to decompress. I would dive first, then he would dive and then we come into shallow water and dive the rest of the day on the order of 30 feet, 20, 30 feet of water and pick up green abalone. We'd be picking up the red abalone in the deeper water. We'd launched the boat at La Jolla Shores and the early part of the summer he would turn me loose and I'd go to the beach and he'd then take the abalone downtown and finally he decided I wasn't working hard enough and he had me take them downtown. But that helped me to learn how to handle a boat at La Jolla Shores so that when I had my own boat I was able to launch it by myself at La Jolla Shores and sometimes I'd launch in Mission Bay. Let's see. So, those are abalone diving experiences. One kind of fun abalone dive I had, I took my boat all the way up to Solana Beach. And I was diving out there in about 60 feet of water, very clear water.

You could see from top to bottom, I believe, and by myself I would just throw the hose off over the side and turn on the compressor and go over and dive. And you had a volume tank and so when the compressor would quit, no one's watching it; you would start noticing it would get a little harder to breathe and you'd know you had several minutes to clean up whatever you are doing and come back to the boat. One time I was out there on the bottom and my air went [snapping noise] just like that, and I thought, this is not right. But from my free diving ability I was not worried about coming back up. And I looked over there at my hose to see what was happening and one of my teammates, Barry Wagner, from the national diving team mates, he was in the water column with my hose cranked in his hands laughing at me and then he opened it up and I had air again. One of the questions you had on there is being frightened in the water?

Ashleigh: Yeah, like if you had any close calls.

Bill: The worst experience I had in the water was one day diving with John Collins right off of Hospital Point and I was in a tight little cave getting green abalone from the back of it. And when I went to back out of this cave I'd been in probably as far as my thighs and I couldn't come back out. And the reason for that is John Collins wanted a safety bottle. He had a little tank about that size that we wore on our back.

Ashleigh: Yeah, a pony bottle.

Bill: Right. And it had its own regulator, I think. Or else it was tied, you could turn a valve and make it go into your, the regulator you are using. I think that's the way it was. I didn't like the idea but he was the boss, so I had it. And the belt had come loose enough to where it was like the barb on a spear tip. It wedged on the rocks I was in and my arms were forward. I couldn't get my elbows back to do anything. And I'm laying there breathing plenty of air and my tender, John, doesn't know anything is wrong and I'm in this cave knowing that I can breathe as long as the air keeps going, but knowing I can't get out and if anything goes wrong I'm done. It was a really bad. So I start hyperventilating and fogging up my mask. And I understand that this is really the wrong thing to do. You've got to calm yourself down because maybe you don't even have enough air to breathe when you are hyperventilating. So I calm myself down and I wiggled around and I did enough wiggling to where somehow I got loose and came back out. That was by far the scariest moment.

Ashleigh: Tense because it's claustrophobic, too.

Bill: And then free diving I had several incidents of being close to shallow water blackout. They weren't scary. It's just apprehension, like you know you pushed yourself too far, you know you are close. But I didn't black out and I was able to start breathing again. I'd get to the surface. So those weren't scary, but they were dangerous. And I made, I knew that that was a very bad thing to do and I, most of my diving is free diving, holding my breath and when that would happen I would be a lot more careful after that. I'd space my dives farther apart. I'd move to shallower water. If I had to go back down to where I'd been for a couple more dives for some reason or another that's when I would space my dives out and be more careful.

Ashleigh: Good.

Bill: Another thing that happened from my competitive diving and getting to be a very good diver I started, I considered that I burnt out that warning that you get from a CO2 buildup. I don't know if that's a valid thing or not. But I got to where I did not have a strong urge to breathe. And I knew that that was dangerous to stay down too long. So in my scouting, and even in my competitive, during the competitions I came up with a method to prevent a blackout and that was, I would count on my dives. I just started a running count and depending on how I felt that day and I wasn't trying to count seconds, but they were close to seconds and something like 45 would be a typical number. Maybe 50. It was time to be aware that you should start planning to go up. And by doing that I would make many dives where I'm coming up to the top number and I know I need to breathe, but I'm not blacking out. That was sort of a safety valve. And I never ran into other people who said that they had that situation. So I don't quite understand. Now that I hardly dive anymore-- I still surf, but surfing you only hold your breath for 10 seconds or so. So when I have done some diving I found that I do have that CO2---

Ashleigh: The feeling of warning again.

Bill: It came back with a vengeance. So it's no longer so fun to go down in the water to stay down a long time.

Ashleigh: Because it's that discomfort that causes the reaction to breathe. Wow. That's really interesting and kind of leads into something else I was thinking of asking you that isn't on the list that I sent you. I remember you mentioned-- I don't know if it was one of the magazines that said you were considered the number two breath hold diver in the country at the time. So I was wondering if you had done any other types of training to attain that status? Or was it just all diving, every dive was a training session in itself?

Bill: That thing in the magazine saying I was number two in something, the author was picking up on the concept that, of the for divers and the Addicts Dive Club I was in the best spear and I was the number two. That's not the country or the nation or anything like that. But, getting to the root of your question, any training or anything. Yeah, we would typically try holding our breath. You do it at home. And then we'd go to a swimming pool. My folks belonged to the Beach and Tennis Club and I'd take Dave Lynn and Bob Shea there and we'd get in the pool and see how far underwater we could swim. Typically a really good underwater swim was a round-trip of however long the standard pool is. I think it is 75 feet. So I think, we were very happy when we did 150 feet under water. Swimming with a faceplate. And without fins, I think we'd just get in the water and do a frog kick. And then we'd also try to hold our breath there. And the way we'd do that, because you tend to be buoyant, you don't want to lay on the surface holding your breath, we'd get in on the deep end of the pool, we'd hyperventilate and then drop in and stand under these, the little metal stair at the end of the pool and put our hands on it and be kind of in a standing position underneath that. And as I remember, a minute and a half to two

minutes was a very long time. However, Bob Shea I think did three minutes one time. He had a bigger lung capacity than we did. And then for training it was just an overall training to be better. I really think that breath holding was how much time you spend in the water and how many dives you make. But to be in better physical shape I used to, I worked at General Atomic as an engineer and I used to run at lunchtime, run along the La Jolla Shores. We'd come here to Scripps and there was a locker room that they didn't mind us using so we'd change in the locker room and run down to the Marine Room and back. That was probably in the years, the mid-60s, so from '65 to '70. Some place in there. And that was the height of my competitive diving. And when I first went to national diving meets, I'm not quite sure what year it might've been as early as '65. No, maybe even earlier than that, '63, something like that. It was in Florida. And we just worked out for two or three weeks before the diving meet. And after my second dive at a national diving meet I was so enthused that I was working out the next week right after the meet. We'd get back home and from then on I'd work out year-round. So I was physically very well fit. I'm five 10 ½. Back when I was competing I weighed between 150 and 154. At the end of a diving meet I'd come in and I'd weigh between 146 and 148. And I was very lean and thin and now I'm 178 and I've been up to 200 and I'm not lean and fit at all. But I'm still healthy. So that's the type of things that we did to get fit. And I see the young divers now and I see divers talking about staying down these long times, they talk about two-minute dives and stuff. I never made a dive in the water I think over 90 to 95 seconds. But I competed and I had a fellow timing me once when we had a national dive meet here in La Jolla in 1970. And he said that I was making 60 to 70 second dives with 50 to 60 second rests. So I was actually spending more time under the surface than I was on the surface and that gives you an indication of the kind of physical shape, and to do well in competition it is the integral of the time on the bottom that is important. And you only need to spend enough time to get a fish. You are not, it's not important to spend more time than required to get a fish.

Ashleigh: Sure.

Bill: So that optimized out and that particular dive was in water that was 60 to 65 feet of water. And I was working that for a couple of hours, and I did well in the diving meet. And I think I may have had a near shallow water event because I do remember moving into shallow water toward the end of the meet. But I pretty well worked that reef anyway. So I may have just moved off the reef because I was finished with it. I'm not quite sure. Let's see. Another thing that we did for practicing for that particular meet-- which wasn't common, but Barry Wagner I think talked us into it and it seemed like a good idea-- we went to Boomer Beach. There is an entry into the water just between Boomer Beach and Alligator Head which was easy to get in. We'd go in there in the afternoons after work and practice shooting little fish. And we would practice holding our breath. And at that point I was able to make up to 90-second dives, and was kind of laying on the bottom in about 15 feet of water in the shade of a reef and shooting little opal eye that would only be about half a pound or so. And I'd bring them in, not to waste the fish I'd bring them in and maybe I'd have 10 of these little suckers and I wasn't cleaning them, but I didn't totally waste them. I was burying them in my garden. So that they would become fertilizer. But that was the only fish I ever think that didn't get consumed. Our

spearfishing meets there were a lot of fish that would come in and there was a group of people that came from an orphanage in Tijuana and they gladly would take all the fish that we didn't, that people didn't want to take home. And they would make a trip to Tijuana and clean the fish and give them to the orphanage.

Ashleigh: That's cool.

Bill: As an aside, you've heard about Barry Wagner becoming paralyzed?

Ashleigh: No.

Bill: Okay, he picked up on this Tijuana orphanage thing. And he kept going down there on his own as he got older, as a retired fireman. He was spending more time down there and he was working on somebody's house I think tied in with the orphanage or something in Tijuana, free labor that he was doing and he fell off the ladder-- even though he was a fireman-- and he fell off the ladder and paralyzed himself from the neck down. This was last, I would gather October, November of a year ago.

Ashleigh: Oh, wow.

Bill: So that's a real shame. He has some, last I heard he has some use of his hands, but-- and he was in a lot of therapy and I, he was difficult on our team. So, he burned bridges, so we don't really, we were so unfriendly with him but he didn't make good friends with us, so we don't, I have not visited him.

Ashleigh: You're not visiting him often.

Bill: I'm sorry about that but that is the case.

Ashleigh: When you were talking about practicing breath holding in the pool that brought to mind a story that you had told me before about Jim Jordan's record-setting and I was wondering if you could talk about that a little bit.

Bill: That was back in high school days and I, I was the youngest fellow in the Addicts Dive Club. There were only four of us. And he worked nights at Convair. And that summer before he tried the dive, so I'm on summer vacation and he is-- I'm going to talk about his deep dive first and then I will talk about his breath holding dive. That summer vacation he would pick me up in the morning. I forget when he slept. I guess he came home, I don't know if he slept before he went to work in the evening, that's probably when he slept. And we'd go down to San Diego Harbor and somebody had loaned him an inboard speedboat, like a small boat. Maybe about 18 feet. Pretty nice mahogany-type wood boat. And we'd go off of the lighthouse there at Point Loma and get out in about 70 to 80 feet of water. Maybe even 90. I'm not sure if it ever got that deep. 70 or 80 almost for sure. I'd sit in the boat and be his safety person, and he would go down to the bottom and the way he'd go down to the bottom is he took big boulders from the beach and would wrap, tie lines to them and make a short little leash about 6 to 12 inches long and have a stick there at the top

and so he could hold that and it would pull him down to the bottom. And I think he was patterning after what he'd seen the pearl divers do in the South Pacific, so he didn't have to work very hard to go down. This is how he practiced for that dive. He'd make several dives. Now this would have been about 1954. Almost for sure the summer of '54. In retrospect it was not a good way to practice for a record-setting dive. But at the time, the record was something like 111 feet, I believe. Or 116. And he was going to try to go I believe either to 116 or 121 feet. And he thought that was enough practice. So, when the dive to do it came, it was off of Scripps Pier and there were a lot of publicity both and a lot of...

Ashleigh: Frank [Leinhaupel] had mentioned Life magazine was there.

Bill: ...Tank divers out on the line and the line went down to 150 feet or so. It was out in the canyon and the first marker I think was at 121 feet or so. And he had never dove on that line. And so he was still using his rock method and going down, and then the water wasn't as clear. It was sort of dark. And when you're diving in 70 or 80 feet of water, the light is reflected at the bottom, so you stay in a fairly light condition. And you see the bottom coming to you. When he did this he didn't see the tag down there, he didn't see the tank divers, he just saw air coming up from the depths. He didn't know how deep he was and we figured he was getting into the range of 90 to 110 feet of water when he just decided he didn't want to be doing this. And he would let go of the rocks and come back up and he may have tried two or three, may have only been one, I don't remember. But he just said enough of that and quit. And Frank [Leinhaupel] made the comment that I didn't know about at the time, that these tank divers saw these rocks coming by them and didn't really like that. I had never really heard that part. So that was one episode with Jim Jordan. The other one was-- it was either prior to that, but it was during the school year, or just after the summer, during the school year. He had liked publicity and he had lined up the newspaper and stuff to do... how are you doing on that?

Ashleigh: No, this is great.

Bill: He had lined up the newspaper to watch him make a breath holding dive and it was I think they called it Mission Bay, no, Mission Valley Country Club is I think the country club that's still there. I think it is the one with the golf course and they had a pool there and I was a student at St. Augustine's High School. So we would drive down Mission Valley Road every day to go to school and I knew he was making this dive and so I stopped there and we watched him make the dive before school. Maybe I was late to school that day again, but it was important enough and he made a dive and I'm not quite sure how long it was it may have been 4 ½ minutes the first time. And he got written up in the San Diego Union. And then he decided to go for 6 ½ minutes and I'm pretty sure I watched both of them and he made the 6 ½ minutes and got on the front pages of the San Diego Union.

Ashleigh: Yeah, I have a copy of that article.

Bill: And he also got written up in the Guinness Book of World Records. I never knew that until my nephew, many years later, told me that that impressed him.

That he had seen that and he knew that that was a team member in my dive club and I didn't know that he'd been in the Guinness world records. The part that was sort of discouraging about that was that he was using oxygen and I don't know how well it was publicized that he was using oxygen, but then later on some dentist was using oxygen and went to nine minutes or so and people have gone further--

Ashleigh: Like hyperventilating with pure oxygen?

Bill: Yeah, I think that's what they did. Now hyperventilating is something that you've probably heard me touch on. Some people say you should not do that when you are diving. I always did it. I found that it helped. And that doesn't mean that it's, maybe the research now says you shouldn't do it, maybe they're the right answer, but there's other dive rules that they have that I don't buy, and that is dive with a buddy and I did most of my diving by myself. And I feel that-- I always felt-- that it was most important that you are taking care of yourself and you're not relying on anybody else. And you are going to be a lot more efficient if you don't feel the responsibility for somebody else while you're in the water. You're only responsible for yourself. So I just feel that the free diving by yourself is sufficient. Now if you're going to do something dangerous and you know you need to be watched then you don't do it until you can get somebody there to spot you.

Ashleigh: Like you did for Jim Jordan.

Bill: Spotting somebody, that's interesting. We were having a national diving meet in 1970. It was my last, no, 1971. It was the last national I was in because I was on my second marriage and that woman did not want me to be spending so much time competing. And I was trying to make the marriage work, so I gave up my spear fishing competition for that. For that marriage. It didn't help the marriage anyway. But getting back to why it's important, in Florida, there you dive by boats because you are far off from shore because the water slopes out so far out. And we are so far out you don't even see the shore. And I'm a little bit off track, but there were some buoys and I brought a sextant off with me; being an engineer I could understand mathematics and angles and stuff and I could take readings off a couple buoys that were there and put us within maybe 15 to 20 feet of being right over a particular reef that we wanted to dive on. And I think that was an advantage. In the clear water people would just get in the general area and then try to find the reef. But getting to the spotting thing. Barry Wagner had decided that he was in such good shape he wanted to make a 100 foot dive. So he had the fellow running the boat-- I think they had a depth finder on it-- take us out to 105 feet of water. And he was going to make the dive for that. And he wanted me to be his safety diver and so I get in the water with him and I looked down there and it's clear. I don't think we could see the bottom from the top. But when he went down I went down behind him to maybe about 40 feet and I could see him going all the way to the bottom and he picked up a rock or shell or something, dead shell and came back up and I'm at 40 feet thinking, and we are free diving, we don't have a tank or anything on board and I'm thinking, what in the world am I being a safety diver here? If something happens to him down there there's no way I can go down there and do anything.

Ashleigh: Right.

Bill: But in reality I could've definitely helped if he was having a shallow water blackout that happened in the last 20 to 10 feet above the surface.

Ashleigh: And being naturally buoyant and he would probably come up if he---

Bill: Oh, and you brought up a good point. Another thing that I learned and recommended to other people, because people would listen to me: if you're going to be a free diver and have any possibility of shallow water blackout you want to weight yourself with your weight belts such that you will float from 15 feet down because you're going to do most of your diving anyway below 15 feet and so that was just a practice that I recommended and had. That doesn't save you with the shallow water blackout but at least you are probably going to be laying on the surface and have a better chance of being rescued, than if you fall back down. Now another fellow that was in our dive club, he was a dentist named Larry Ward. And he had either a white, I believe it was a white seabass that he had speared in fairly deep water at the Coronado Islands. And he had another diver with him from our club and I think it was Carpenter, Jim Carpenter, who left town and we haven't seen him for ages. Or ever since. Anyway, he had Jim be his safety diver when he went down to cut the fish loose and he has his knife in his hand and he's coming up and at about 15 or 20 feet he stops swimming up. But his arms are going back and forth with the knife in it, kind of slow and Carpenter realizes this is, you know, not right. Carpenter goes down and grabs him, brings him up to the top from behind and gets him, his face in the air and squeezes him and he starts breathing and he comes to and says what's going on? You know, he would've been dead. And being a dentist, he scientifically thinks what is a good solution? And his solution, I never cared for it, but his solution was if you ever have to do something like that, you take your weight belt off and you carry it in your hand on the way up. And if everything's fine then you put it back on, but if you pass out you are going to drop it.

Ashleigh: You're naturally going to drop it, right.

Bill: So that was his solution. Never saw anybody doing that but I suspect he did it.

Ashleigh: Especially after an experience like that, anything to make you kind of feel a little bit safer, I would think.

Bill: We had one diver in a different dive club that I belonged to called the Delta divers and it was tied in with General Dynamics, which was also at one time the owner of General Atomic. And that was more of a fun diving club, families and stuff. And we had one fellow that we called Ranger Roy. He was a second World War paratrooper, Ranger, and he always stayed in very good shape. So he was older than us. He passed out diving with another fellow in Solana Beach. That fellow found him on the bottom, brought him to the top, got him on the paddle board and yelled over to a commercial diver who happened to be Bob Shea.

Ashleigh: Wow.

Bill: Who had a tender, his girlfriend was a tender on his boat and she signaled Bob to come up. Bob swam straight up rather than going to the boat, saw what was happening, detached himself from his hose and swam over and started reviving him and had the ab boat pull anchor and come over. They got him on the boat and took him right into the beach and had radioed the lifeguards and they took him to the hospital and he survived. About 10 years later we were having a dive, a club dive at Marine Street in La Jolla and he was diving off of a reef called Horseshoe's. It's a good surfing reef. And he didn't come in at the end of the last dive he made. And I looked up the beach and I saw a commotion there on the sand at the north end of the white sand beach there, just before you get to the rocks that horseshoe.

Ashleigh: Right.

Bill: And I walked up there and he was being worked on by paramedics. And I saw them put a needle into his chest, of adrenaline I think. They could not bring him to. He died. So he got an extra 10 years, but he did have a shallow water blackout. They say-- his wife says that he had a cold that day and he was rather stubborn he was going to dive anyway. But that-- we lost one of our people that way. And I've known several different divers who have had blackouts and some who have died but that is the one that was closest to home.

Ashleigh: Yeah. Did-- it being a club dive and that all happening and witnessing something like that-- did it take some of you guys a while to want to get back in the water after that? Did that keep anybody from diving for a while?

Bill: It did not affect me at all because I've always been aware of that.

Ashleigh: Yeah.

Bill: And I felt he made a mistake that I wouldn't make. But I do know another diver that was a good diver, never a competitive diver like myself, named Jack Reed. He was an engineer at General Atomic like myself. And he took that as an option to stop even the club dives. He took up other interests. Flying, he flew little airplanes, radio control and things like that. He would still go on camping trips where we might go diving, but he was the one person that I know that was a good, confident diver who took that as a good warning not to do it. We had another diver that died at one of our diving meets, but he had a heart attack. His name is Cliff [Kickbush]. He also was an older fellow that had been in the second World War. And we were having a dive meet at Bathtub Rock there.

Ashleigh: Torrey Pines.

Bill: North Torrey Pines. And he entered the water and did not make it through the surf. And died of a heart attack and washed in onto the beach and some people walking the beach found him and one of my boys was climbing around on the cliffs and kind of saw the people there and went down and so he told me about it and the lifeguards came and the coroner came and they wrote it up as a drowning rather

than a heart attack. But he would not have drowned in the surf. He was also a surfer and just going through that surf was not a problem. And then another fellow had a heart attack in one of our dive meets, and this was at North Birdrock. I believe that's where the dive meet was. He was Bob Nicholas. I saw him last Sunday, he's 81 years old now, still getting around. I don't think he dives anymore, but he might. He still deals with diving equipment. He goes to swap meets and garage sales and buys up diving equipment and sells it out of his garage and I used to buy my diving gear-- after I stopped being a competitor-- from him rather than pay the high price of the dive shops.

Ashleigh: Of course.

Bill: He had a heart attack during a diving meet and he was in good enough physical shape that he just came in anyway. But he could have called some friends over to go with him and through the surf and now I'm remembering it was not North Birdrock, but it was at that bridge at the south end of Del Mar, that slough.

Ashleigh: Yeah, the San Dieguito River mouth.

Bill: They were diving out there and I believe he was coming in from the water there and they took him to the hospital and told him he had a heart attack and he stopped smoking because of that. And took better care of himself. And continued to dive up until, I'm sure up till his 70s. Because I remember the last time I joked with him was one of the last serious dives I had and it was up at Northern California for abalone. And I hadn't-- I was winding down my diving at that time and he went on a trip with my nephew and myself and a couple other younger men. And I-- the water was bad and I had, I'm not sure I think the limit was three, and I had probably two abalone and I was looking for my third and it was just too hard. I was finding smaller abalone. You couldn't see from the top where you were going so every time you went down to the bottom you had to relocate yourself [inaudible] and I finally decided I'm taking the risk even though I'm only diving in 12 feet of water or so. I'm starting to take a risk. I'm out of shape. I'm getting tired. I'm not going to do this anymore. So I'm pretty sure I quit without getting my limit of three abalone and I looked over and Bob is still diving, so I paddle over to him on my way in. We had a boogie board for a float. That's what I was using. And I told him, you know, I'm tired, I'm going in. I don't have my limit. He only had one abalone and he was so determined to get his limit, and he's not in as good a shape as I'm in, but he was still doing it and I'm thinking Bob, please quit. But I'm not going to tell him, "You really should quit." But I gave him all indication that he knew I was younger and healthier and I was quitting. But he still stayed in the water for another probably 20 minutes. But he was in poor enough shape that in order to get him to dive at this location, we would carry his weight belt up and down.

Ashleigh: Oh, wow.

Bill: That's of little interest. Since that dive he had open-heart surgery. And it was successful. And he still walks and talks. Being 81 years old I would say if you saw him and talked to him he would say he's a healthy 81-year-old. But not an athletic

81-year-old.

Ashleigh: Right. Just to transition a little-- we've got plenty of time, but in that story you mentioned that it was harder obviously because of your age and because your diving was winding down. But was it also more difficult because there were less abalone? Because that's the other interest of this project, especially with spear fisherman and free divers. I mean, you guys are essentially naturalists, you observed the fish---

Bill: You want to know a little bit about what we observed in the water over time?

Ashleigh: Absolutely, yeah.

Bill: And some people you talk to will not want to tell you because they will, they assume---

Ashleigh: Assume I'm a scientist that's going to blame them.

Bill: Assume you're looking for reasons for us not to dive.

Ashleigh: Right.

Bill: I don't feel that way at all. So I'll tell you straightforward as I can, on the abalone I commercial dove. I know what abalone were like before I ever got an abalone because I talked to the commercial divers, the older kind. They talked about the time right after the second World War where they would dive off of Catalina Island and have a limit put on them by the processing plants because they could not process all the abalone that the divers would get. Their limit was, my mind says 300 dozen.

Ashleigh: Wow.

Bill: It may have been less, but it was not less than 150 dozen. I'm almost sure I'm right about the 300 dozen. So that would be 3500 abalone. And they would get those abalone. They'd get up early in the morning. They'd get the abalone sometimes by 10 o'clock in the morning.

Ashleigh: Yeah.

Bill: Then they'd have the rest of the day to drink and relax in their boats and stuff. So that gives you an idea how the abalone were like snails in a garden that nobody put snail bait out.

Ashleigh: Also, at that time do you think they were diving hookah, or were they still using full hardhat diving gear?

Bill: Probably hardhat.

Ashleigh: That's even more impressive because the hardhat outfit is even more cumbersome and you are slow moving in it.

Bill: A hardhat diver is good.

Ashleigh: Very true.

Bill: When I worked out of Santa Barbara we had a month there where our boat was being worked on-- maybe not a month, a couple weeks. The fellow who owned the boat that we used was a hardhat diver who owned three boats and he worked with one of them. And since we were not able to use our boat he took us out as tenders on his boat. And so I tended the line for a hardhat diver. I even took my free diving gear and watched him work. And he got into very calm, good water at a place they called the Breakers at the north end of San Miguel Island. Very calm, and because it was very calm he was able to get in where there were a lot of abalone. I think he picked something like 50 dozen abalone that day. It was a huge amount of big red abalone. The ones at Santa, the ones I'm talking about the 300 dozen limit would most likely be pink abalone. So hardhat divers getting to-- when I got into the commercial diving the summer before I went to Santa Barbara I attended for about a month to a commercial diver out of San Diego. And he was, let's see, he was a hookah diver but he also wore that faceplate with the air flowing through. He didn't seem to have a problem on the depth he went, but he was a full-time diver and so I'm sure he had a lot bigger compressor than what I had out of Morro Bay. The boat came out of Morro Bay but we dove out of Santa Barbara and I think that's because it was a compressor for a hardhat diver. And the air goes in, but you can re-breathe your air a lot and you do not re-breathe it when it's only in your faceplate. So that's probably why the smaller compressor.

So when I tended for him, he typically would have 20 to 45 dozen days. 20 dozen was not a good day at all. 35 to 45 was what he was shooting for. And he would have a mixture of red abalone and pink abalone. And he-- at the end of the month that I was tending for him I was getting ready to go back to Notre Dame-- but he got bent. He didn't tell me. But that night he decided he had a bubble. And so the next day we went out to the dive and he says well, Bill, I'm not really going to work today. We're just going to-- I'm going to decompress out there. He wasn't into going to the chamber or anything. So we spent an hour or more following the decompression he wanted to do. And he went out, I think he had been diving-- what got him bent was at the end of his day of diving for abalone he go out into some deeper water and pick sea urchins and get several bags of sea urchins. He was doing his deep dive towards the end of a diving day and he would take these sea urchins and trade them to people in Little Italy I think for wine or else sell them there for wine. So anyway, he decompressed that day and then he says to reward me or something he's going to let me try the diving gear. But he wasn't going to be doing it. He took me-- we took the boat into La Jolla Cove into fairly shallow water and a fellow friend of ours, Henry Henson.

Ashleigh: Oh yeah, I have heard of him.

Bill: He commercial dove with Chuck Snell. Chuck Snell is the name of this

commercial diver.

Ashleigh: This is Chuck Snell! Yeah, I know a lot about him.

Bill: Henry was given the orders: you guys take the boat out there, get some abalone, let Bill dive for abalone and you can dive for abalone. So we dove off of South Boomer Beach but they didn't tell me in advance so I didn't have a wetsuit. And trying to dive without a wetsuit with a thermocline, I think I could only go for about half an hour. And I got abalone and I felt comfortable with the hookah rig and Henson got some abalone and so we made a little bit of money and took the boat in. And that gave me the theoretical qualifications to later be able to be a diver out of Santa Barbara.

Ashleigh: Oh, I see.

Bill: And I had always been a rather quiet, shy type of person. So my abilities would bring me up to opportunities, not my go-getting.

Ashleigh: Rather than advertising yourself, or...

Bill: I wouldn't push myself. Now I'm not ashamed to push myself. I'm quite happy to talk to you.

Ashleigh: It's great!

Bill: But what happened then, why did I get a chance to dive out of Santa Barbara? I wasn't even looking for it. But a fellow classmate a year behind me at St. Augustine's knew that I had done this stuff. We were in college already, so he was probably a sophomore at the Catholic men's college here. He was a football player here. And the football coach's brother was an ab diver up there.

Ashleigh: I see.

Bill: And had the boat and so that was his "in" for a boat, and then knowing that I had been a diver and knowing me from St. Augustine's even though I didn't seem to know him, he contacted me and said, "You want to do this?" and I said, "Yes, I want to do that!" Because I was trying to break into abalone.

So we got to do a whole summer there and my folks OK'd it. We get our mail, they'd send mail to the harbor master in Santa Barbara and after a couple days out at the islands we'd come in to, you know, resupply and I'd check for mail there. That was kind of neat. And let's see. Am I getting off the track?

Ashleigh: No! I mean, we can bring it back to more fish--

Bill: The real track was depletion of resources.

Ashleigh: Yeah. I mean, a lot of species have been rebounding, so the reason I'm interested in it is not necessarily the same old story of everything having been wiped

out and now we are so much worse off. It's more to simply examine how things have changed.

Bill: And also when you understand how things have changed, how things have been in the past and maybe we can bring things back. So getting-- thinking about abalone in the late '60s, the Bottom Scratchers Club, they had a guy here at Scripps, one of their members. And they had a lot of experience and they were, I don't know, 20 years older than we were. They came to the diving council and I was active in the diving council. They came and wanted us to work toward a moratorium on abalone or change, make the rules tighter on abalone. Make some no fishing zones for abalone. I remember the diving council being younger people, myself included, just listening to them and thought, "Oh, these are old men who can't cut it anymore. And they are wanting us to give up our abalone trade." So we did not pursue that at all. We'd listened to them, but you know, basically voted not to follow-up on it. Years later it really did happen. My own experience going from professional abalone diver to then stopping it and just doing my sport diving which I've done before and after, I finally got to where the abalone were hard to get and it was not worth doing for the preparation of it. I could still get them. So I reached the point in probably the mid-'70s that the only time I would go after abalone was when the Delta Divers would have an abalone dive. And I was going to go up and visit one of my sisters that lived up in Mammoth because they liked abalone and I would bring abalone to them at Christmastime when I would go up there to visit them. And I would go diving-- I'd stopped diving in La Jolla for abalone because it was getting too hard to find-- and I would dive off of Sunset Cliffs. I forget the name. Adair Street, there is a stairway that goes down to the bottom there. I think they may call that beach "Garbage" or something like that. That used to be a place where there were always plenty of abalone and I finally got to where even that was hard to get the limit of abalone for my brother-in-law. And so I can remember later making trips and just telling them it was too hard to get abalone. I don't bother.

Ashleigh: And so eventually there was no point in fighting the moratorium on it.

Bill: Yeah, and that would've been-- by 1980 the only time I'd go abalone diving is when we would make trips up to Northern California. And so when they put the moratorium on them I felt that that was probably a good idea. I do remember a year or two after the moratorium diving at Boomer and swimming towards Shell Beach and this was a dive with my nephew. He was lobster diving and I was just snorkeling. I wasn't even buying a fishing license at that time. So I was just looking. And I was still in good diving shape to where I was diving down and looking at the bottom. I was finding abalone in there. And it was kind of neat and I knew there was a moratorium and it was hard to find abalone, but I felt that abalone were already coming back only maybe two years after they put that moratorium on. So that is one species that may be making a turn. But I also know, I believe from listening to Bob Shea, that there is a disease, a wasting foot disease.

Ashleigh: Yeah, withering foot disease.

Bill: And that probably came from Africa and such with the culture from abalones.

So the problem isn't just the sport divers.

Ashleigh: That's a major point I want to make actually, in the paper. That not all population declines were cut-and-dry results of overfishing entirely.

Bill: This is an interesting story. With my nephew, he used to take me on diving trips to Baja. And near the end of my actual serious spearfishing we go down there looking for big yellowtail. And there's a place called Asuncion, it is south of Guerrero Negro on the Pacific. And there was a little town just north of that, I forget the name of it at the moment. Anyway they had gone down there enough that they had made good friends with a Mexican commercial abalone diver. And he has the legal papers to work in our country. He works up in Alaska part of the year. He works out of San Diego Bay part of the year and he works in Ensenada part of the year. His wife is a schoolteacher in Mexico. So I asked him why he hasn't become a citizen, he says I don't need to. Mexico is really his home. Anyway. Initially when we first knew him he knew almost no English. Now he speaks fluent English. So I've had nice conversations with him and he told about-- on our earlier dives when he didn't speak very good English but one of the fellows was very bilingual, actually had a business in Mexico-- that we get the story that the commercial divers police themselves down there. They were interested in preserving their abalone. So they put limits on themselves. Well, that is the gist of it. But they were serious about it because one time we were diving down there before I never knew about him or about them and the Delta Divers, having a dive, we took some abalone and the little townspeople sent the priest over to talk to us.

Ashleigh: Oh, wow.

Bill: And he told us that was the wrong thing to do. So we got rid of our abalone shells and ate the abalone. And then that evening some vigilantes-- that's what they used for the term, we consider vigilantes to be bad people, they use the term as enforcing the town's rules, these people that came. But they didn't tell us, we learned later that that is what they were. They were friendly and they watched us a lot in the evening and talked to us. They were basically looking to see if we had abalone in the camp.

Ashleigh: That's pretty impressive.

Bill: I can even remember offering them beer and they turned it down. The Mexican men seldom did that. They decided we were okay, but luckily that priest had given us a heads up. And then later I learned from the Mexican diver that vigilantes really did enforce those rules. So they had an interest in preserving their abalone. And now wasting foot got all the way down to them and messed up their industry even though they were trying to protect it, which is a real shame.

Ashleigh: Absolutely.

Bill: They did better than we did up here because they put their own limits and who could do it.

Ashleigh: Yeah, and still they lost their abalone. Another I wanted to ask you about is if you remember something that scientists mostly, but a lot of divers too, have referred to as the warm water years in the late '50s. A lot of our kelp forests died and washed up on the beach. Some people-- I spoke with Chuck Mitchell and he recalled it. And at the time he was also working with a scientist at Scripps doing kelp forest surveying, so he really noticed how they declined. But the La Jolla kelp forest was almost completely lost. I'm wondering if you remember that but then that might have been before...

Bill: No, no. I remember it.

Ashleigh: Great, you do?

Bill: I remember it when I came back. And I remember I was commercial diving with my own boat and diving again off of that Hospital Point area. And having the current being so strong that I'd see the kelp bed laying down like this [gestures] and having to deal with that strong current by myself with a basket of abalone and stuff. And my understanding was that the warm water had brought in I think they called them cockle shells, a little seashell that looks like a, let's see, the Shell Oil Station [logo]. That kind of shell. And they'd be, oh, about the size of a silver dollar and they'd be in clumps and they'd hang fastened on the kelp and so they made the kelp heavier. So the kelp went further down in the current. And it spent more time under the water than it did in the surface layer water...

Ashleigh: Getting less sunlight--

Bill: ...So didn't have as much sunlight and we felt that was one of the causes of the kelp dying which would be related maybe to the warm water if those little shells were related to it. The sea urchin industry and the kelp cutting industry wanted to blame it all mostly on the sea urchins so that they could harvest them and kill them. Now, kelp cutter people wanted to kill the urchins. The sea urchin divers didn't want them killed, so there was an argument between the two and somehow the diving council got involved in it and because the Council got involved I got involved. I represented the diving council going to the meetings between the two and Fish and Game were at those meetings and we would go around and around arguing those points. And they-- I don't know what they ever came to as an agreement back then. The diving council definitely came to the conclusion and recommendation to fish and game that Kelco could not put lyme on the bottom-- I think they would put lyme for sea urchins-- because we were pretty well convinced that it killed other wildlife. We were not in disagreement that they couldn't go there with a hammer and individually kill sea urchins around the kelp stalks. That was all right. And I think the sea urchin divers basically had agreed to that, too. Because they were gathering the sea urchins. Maybe the difference would be that the sea urchin divers probably only picked the large ones and would leave the small ones to grow up, whereas the kelp company if they could smash little ones they would probably smash the little ones.

Ashleigh: That's so interesting.

Bill: So that was something to do with the kelp. I also, being scientifically oriented, I looked at whatever I could on subjects on the ocean. So I saw old maps showing kelp growing heavier in La Jolla and then lighter in La Jolla and then heavier. So it wasn't just something that happened in my time period. It did cycle back and forth. And I also observed free diving in the year of 1970 off of what we would call South Windansea-- so between Palomar Street and North Birdrock out in the kelp there-- going across a place that did not have kelp in about 25 feet of water, seeing individual kelp fronds coming up just maybe 6 to 12 inches apart. Just the whole, like grass growing there, and watching it because I dove out there often enough, watching it quickly go to the surface and you wouldn't feel comfortable swimming through it. And so I realized that given the right conditions, the kelp would be coming back. And that over time I've seen the kelp come back quite a bit more than it was back then.

Ashleigh: Sure.

Bill: Not diving, I don't know what the sea urchin bottom, you know, life is like out there now.

Ashleigh: Yeah. I was down diving off of Point Loma last week, last Friday and there are gaps in the kelp in one area. It's referred to as an urchin barren, but it doesn't look as barren as you would think. There are still a lot of fish that live there and it's very--

Bill: Well fish are happy to be around the sea urchins.

Ashleigh: Oh yeah, sheephead and such.

Bill: Yeah and there are other fish that are happy around that type of rock. The blacksmith and the señorita fish. A blacksmith-- that is one of the things we'd use in diving to find a reef is if you found if you are swimming on the surface and you run into a blacksmith you'd go down, because they want to live near a pile of rocks.

Ashleigh: Oh sure. I was just night diving the night before last out in La Jolla Cove and you see them at night when you come across the rocky reefs. They are all sleeping in their little nooks, it's really cool. Another thing with the kelp, too, is that we've gone through warm El Niños and La Niñas with the cold water. These warm water years, that comes along with a lot of storms and the storm energy will wipe out the kelp as well, just the physical disturbance. But then kelp as it processes carbon it grows incredibly fast, so when it's got cold water with more nutrients, that stuff can grow up to six feet a day, six to 10 feet a day, I think.

Bill: The little young stuff was coming up fast.

Ashleigh: So it must have been colder water years when you noticed they were growing faster.

Bill: It probably was. I know we had colder and warmer water years. I like it when it's warm. But you just have to deal with it being cold. Just a couple of years ago I remember boogie boarding where the water in February was cool, not really cold. And that summer it got the same cold that I was seeing in February. It was just really unusual. And that was just, it feels like two to three years ago.

Ashleigh: Yeah, I wonder. I mean I've noticed just this winter it hasn't seemed like it's gotten very cold, and when it has gotten kind of cold it has not stayed cold. I mean right now you can surf without a wetsuit. I've been surfing without a wetsuit for the past week. And diving even-- I don't recall exactly what my computer read at depth, and the thermocline was pretty strong at Point Loma because I was around 55, 60ft, but my night dive the other night was no deeper than 45 feet of water and it was toasty.

Bill: Yeah well the thermocline is a different layer of water. And these Santa Ana conditions, they typically would move the surface water out and bring in

Ashleigh: The upwelling, yeah.

Bill: And it would seem to me that that ought to be colder, but it seems to be warmer water. I don't know. You are more of the scientist.

Ashleigh: I'm still a graduate-level scientist, not quite professional. This has been really great. One other thing that I thought of as you told that story about the Bottom Scratchers advocating for the abalone moratorium-- and I'm really interested in the Bottom Scratchers because Jack's son Robin [Prodanovich] is a good family friend and has a lot of Jack's old guns and all these old artifacts, so that was actually one of the inspirations for this project. That's kind of where the idea came from. Most of the folks that I've been able to get in touch with that have been so generous with their time have been Addicts. So I really have a lot less Bottom Scratchers stories than I was expecting to get and I was just wondering if you had any other memories of them. Frank [Leinhaupel] kind of viewed them as the motive to compete. He said he wanted to challenge the Bottom Scratchers "if they were so good."

Bill: We wanted to be better than anybody else. We named our club the Addicts because we were addicted to diving. And we kind of were. I remember in high school I had a friend that lived in Point Loma from my high school, Roger Brunelli. He would call me to see what the water was like in La Jolla, and I lived in a nice house on Camino de la Costa right in front of the big Birdrock Cove, half way between Birdrock and North Birdrock. And we lived across the street but there were two vacant lots in front of us so I had a good view. And I used to tell him it was diveable and he'd get on the bus and come to go diving with me. If I just saw a place that didn't have foam on it. I mean, it was crazy. He'd get here and say, no. We can't go diving. But that gives you an idea of how much we were interested in diving. Now he was a friend of Jack Prodanovich because he lived nearby.

Ashleigh: Down in Point Loma.

Bill: In Point Loma, not Point Loma High, but the junior high school, Collier I think-- not Collier, there is another one that is on, just got sold and I think they are building apartments there-- that he worked there. On the street called Chatsworth.

Ashleigh: I'm not sure. I know he was also a night custodian at Point Loma High, too. I'm pretty sure.

Bill: You know his son?

Ashleigh: Yeah.

Bill: I wonder if he wasn't also the night custodian of this other place because I remember in 19-- let's see, what year would that be? 1954, he sold me a powerhead, a 22 powerhead to put on that spear gun that I--

Ashleigh: Jack did?

Bill: Jack did. He wanted to see my spear gun and put an extra bolt behind the seer, the trigger mechanism. Just in case I pushed it against the rock and it tried to send the shaft back in the gun, it would have something extra to hold it.

Ashleigh: A little safety feature.

Bill: A safety thing. Nobody would ever do something like that now. With all the litigation, he wouldn't be selling a 22 powerhead to a kid, a 15-year-old kid. But anyway I think we were at that other school that was a junior high school. And then Roger would talk with us and he would tell us stories and experiences with fish and we would dive together and he would see things that we didn't see. He would see fish that we did not think were there. And we gave him the nickname of BS Brunelli, because we thought he was making this stuff up. And he wasn't. But for a long time I figured that, we thought he was making it up. But like I said as I became a better diver I realized that some of the things that he was seeing were where he was seeing them and the fact that I didn't see them didn't mean they were not there, and he had the experience of talking with the Bottom Scratchers and knowing more about it and believing that they would be there and looking for them and so he would see them. So it was years later that I realized that he was a lot more accurate and a good diver than I thought he was. He later-- he was in my class at St. Augustine's. He left after I think his sophomore year because his dad was a Marine. And an officer. And when I got to Notre Dame my freshman year, the first week there, the first couple days I ran into him. And we became roommates for our junior and senior year. He took me to Camp Lejeune where his father was a general and in charge of the Temple June and he kept his diving up and he would dive on the rocks out in the Atlantic and be getting amberjack. Talk about that. I don't remember him being anywhere near as interested in spearfishing as I was. He later became a Marine officer and stories I heard about him being a tunnel rat. Which is not something that an officer would do. But pretty reliable that he was kind of crazy and

did things like that. And he ended up marrying a Vietnamese woman and he is still alive, but being shy I have not talked to him. We were-- he was missing. We didn't know anything about him for many years. And he doesn't come back for the reunions at Notre Dame. So I get my information secondhand from his senior class roommate. He was a fellow who took me out. I told you the story about going out with the frogman which were the--

Ashleigh: UDT.

Bill: UDT demolition people from North Island and I guess now they would be Rangers and diving at South Island there at the Coronados-- and one of them spearing with tanks a black sea bass and either him or another fellow thinking he'd kill it, and wrapping his legs around it with his knife and trying to hit it in the shoulder or something and the knife glancing off and cutting his thigh. Badly. And so that ended our diving trip. They had dropped us off in shallow water then they had the boat out in the deeper water at a place called-- there is a kelp bed off of, I don't know the name of it, halfway down the lee side of South Island. And they came in and picked us up and we had to run back in and stop the bleeding on his leg. But that was an interesting dive with him.

Ashleigh: Was there anybody in the Addicts that wanted to be a Bottom Scratcher, or...?

Bill: You mean why didn't we try for that?

Ashleigh: Yeah.

Bill: This is kind of interesting. Before I got into the Addicts, Dave Lynn, Bob Shea, myself, Art Wilkinson, an older man, I mean a guy in his 20s, and a fellow either Jim or Bob somebody. Horrible. Can't remember his name. But I think he, we formed a little club called the Cormorants. It was in existence for six months or so.

Ashleigh: Was Ron McConnaughey in the Cormorants?

Bill: No, he was in the Skinsters with [Frank] Leinhaupel. But this fellow was a submarine person in the Navy, and I think he ended up at Scripps and I think he still-- well he might be way too old for Scripps now, but he was one of the younger people that got into the Bottom Scratchers.

Ashleigh: Jim Stewart?

Bill: No. No. If you had a list of the names of the Scratchers I could point him out. I believe he was...

Ashleigh: Let's see. I believe I have---

Bill: ...in that club with us as kids and with a couple older people.
We did not feel that the Bottom Scratchers was something that you really

wanted to be in because they already had done their thing. They were a whole unit in themselves. We wouldn't fit.

Ashleigh: Yeah.

Bill: But there was one diver who I knew found it important to get there and he got in there. Let me just look at these names. Can you go further down?

Ashleigh: I think that's it.

Bill: Before Harold Riley. Earl Murray⁶.

Ashleigh: Earl Murray, yes he was---

Bill: Look at this, the "Great Cormorant". Think that ties in with the idea that we had a dive club called the Cormorants that was just in existence for a very short while and he was one of them in it and I didn't know him very well. I didn't have an interest in knowing these two older men that were in the club, and then I got pulled into the Addicts and my diving buddies Bob Shea and Dave Lynn didn't have an interest. I think that club just sort of dissolved. He may have gotten in. Oh, so they don't say what year he got in.

Ashleigh: No, he joined in 1955.

Bill: Oh, that's-- that is so close to when we were doing this club. Like 1954. So that is what happened. He just sort of graduated from this little club that really never did anything other than Bob Shea did a design a patch for it and I think we got a patch and I think I've seen that patch before. Okay, going on with these guys, Earl Habecker⁷, he was also a Navy person. And I did not know him, but when we had the national diving meet in 1970---

In 1970 somehow they got a hold of him and he was the master of ceremony for the national diving meet that we had in La Jolla at the foot of Palomar Street and he's a nice-looking man, big fellow. Good voice and very comfortable on the microphone. So I interacted a little bit with him over that. Bill Johnson⁸, I interacted with him a lot. He owned the San Diego Divers Supply. He was co-owner of the Divers Supply there on Midway Street. And he liked me because I was a high school kid and I'd come into his shop some of the time and they had a running competition every month for the largest fish and the largest lobster. I just remember winter months but it could've been year-round. But during the winter months I had a hole, lobster hole out of Gunnery Point in probably about 25 feet of water and it had a big bull lobster in it that would run about 10 pounds and I would go and check out the Dive Board there and if the largest lobster was eight or nine pounds or lower toward the end of the month I would go out and get my bull lobster and come in and win the thing with it. And the prize was a choice of some diving equipment and I

⁶ Earl Murray, Joined the Bottom Scratchers in 1955, Nicknamed "Great Cormorant"

⁷ Earl Habecker, Joined the Bottom Scratchers in 1960, Nicknamed "King Fish"

⁸ Bill Johnson, Joined the Bottom Scratchers in 1964, Nicknamed "Sand Dollar Bill"

would usually take the dive fins, the big giant duck feet. And once or twice I got it with a big sheephead which is not something that I would know would be in a certain place. But that-- if I had a big sheephead I would take it.

Ashleigh: If the opportunity presented itself, right.

Bill: See, if it was the biggest fish and typically that sheephead would be 10 to 12 pounds I think. The concept on that hole for lobsters is that lobsters like a particular hole. If you take a lobster out of a hole another-- this is a really good piece of real estate-- another one will get it. So another bull lobster that wasn't able to dislodge the one I took now gets it because he doesn't have to fight for it anymore. So as early as a month later I might be able to win the prize again. I'm not saying that I won a lot of times, but I bet I won it three to five times in a couple years. And he always recognized me. He had, he owned one of those boats, like the Sand Dollar or something, that would go to the Cortes Bank and I know I went out on his boat but he wasn't the skipper and I told him about it later and he was glad that I went on the boat. Once or twice. I told you about those, the tank diving. Then going further down that is Bill Johnson. Harold Riley⁹, he was the president of our dive council. And I was a vice president. And he was more of a politician-type person and I was only active because I started out as competitive chairman, then when they didn't have anybody I sat in as vice president but I think I still was competitive chairman. Vern Fleet got me to be competitive chairman early on and that helped me to be more interested in competition. So Riley was really serious about getting into the club. He was a politician, so he worked himself into getting into the club. And he wasn't that good of a diver. But he worked at becoming a better diver and they helped him to become a better diver and so he got more serious about it and he got into the club.

Ashleigh: The Bottom Scratchers.

Bill: In 1969. He died the next year, shallow water blackout at Bathtub Rock¹⁰ in calm, clear water and the best we can figure is he was diving by himself and swimming you know, seeing how far underwater he could swim and that is relatively shallow water, probably 20, maximum 25 feet of water. And just overdid it and didn't come up and they found him the next day. It was a shame, but he got what he wanted. He became a Bottom Scratcher. He was a politician-type diver. But he wasn't a good enough diver to do the things that these older men had done. And then Jack Taylor¹¹, he came in. I don't know to what extent he was a diver. But he was the last person they took in and I think they were getting ready I bet-- this would be my speculation rather than my knowledge-- but Harold Riley petitioned them to take somebody else then and they decided-- I'm thinking they decided amongst themselves well, if we're going to take Harold Riley, well Jack Taylor is as good or a better diver then him. And he's been a friend of ours all along. I believe he lived in Lamar Boren's home there at Birdrock. And I know that Harold Riley had

⁹ Harold Riley, Joined the Bottom Scratchers in 1969, Nicknamed "Parrotfish".

¹⁰ Torrey Pines State Beach, San Diego, CA

¹¹ Jack Taylor, Joined the Bottom Scratchers in 1969, Nicknamed "Sea Horse".

access to the home because we had some kind of a meeting tied in with the diving council in Jack Taylor's home and I don't believe Taylor was there when we were there. So I think they decided to bring both of those guys in and then close it officially forever.

Ashleigh: Right.

Bill: And then, but Taylor is an interesting person in my back history. Back in this time-- 1953, '54-- I told you that in the winter times I would dive at the Casa and that occasionally he would pull up there in his sports car which was some kind of a convertible high-end car with a trailer with a high-end speedboat behind it. Do you know about this?

Ashleigh: It sounds familiar.

Bill: You're just understanding what I'm saying. He pulled in with that and he was flamboyant and would be wearing his bun huggers.

Ashleigh: This is Jack Taylor?

Bill: Jack Taylor. He's a very muscular fellow, round like a barroom bouncer. And his occupation was a stuntman for Hollywood. And he would occasionally talk about riding the horses and things of his stunt diving-- somehow I'm a little high school kid and I can hear these older people talking and I remember him talking about how they'd be riding the horses in the Westerns and when you see the horses go down they have a tripwire on their hooves, on their legs and that would make them trip right in front of the camera. Not acceptable today, I don't think. But back then, they were. And he's a big strong stunt guy, so he'd be doing these stunt things and he would know how to fall--

Ashleigh: How to roll off...

Bill: So it was kind of impressive seeing him. I don't remember ever seeing him dive, but he was friends with some of the older people there at the beach. And when he was in town-- I guess he owned that house in Birdrock and I grew up two blocks away from him but never saw him at the house. It wasn't until many years later that I ran into him so I'm glad you called up these pictures here. I understand the Scratchers better. Oh, now this--

Ashleigh: Al Larson¹².

Bill: I don't think that is true.

Ashleigh: Because Al was always diving with the Addicts, I thought.

Bill: Yes, now...

¹² Al Larson, Joined the Bottom Scratchers in 1953, Nicknamed "Dr. Grouper".

Ashleigh: Well this¹³ is also posted by a dive club. It could be...

Bill: You need to talk with Prodanovich's son. That could be true. Because I did not see Al Larson during that time period.

Ashleigh: Really?

Bill: And I graduated from college in 1960. And then from graduate school in '62. And I was doing my commercial diving in '57, no, '58, out of Santa Barbara. I guess it was '59. I'm losing track. Yeah, it would've been the summer of 1958 or '59. Almost for sure '59. Yeah, that's an accurate number. 1959 is the summer that I worked up there. So I was away from things. He could've been pulled into them at that time. He was the least physically fit diver in the Addicts. And that was because he was a smoker, but he was a good diver. He made spear guns real well. He took me diving a lot. Between Leinhaupel taking me to Baja before I got in the club and me diving with him, I guess I did most of my diving with him after we got in the club. Leinhaupel got me in, but anyway I did a lot of diving with him. When he speared the world record yellowtail it was off of the caves and we entered---

Ashleigh: When Frank speared it?

Bill: Al Larson speared the world record yellowtail and I was with him. We entered the water. There used to be spear caves from Prospect going down to that corner of the caves. Not where the cave store is.

Ashleigh: The slides?

Bill: Yeah, the slides. It would be the south end of the slides. So we were swimming out there and we were in like 18 feet of water and he speared that fish and he was so excited he could not dive down to the bottom and it had tangled up in the kelp. And he was very aware of the rules for the world record, so he said Bill, don't touch my fish, do not do anything with my fish but I want you to go down and look at it and see how good the dart is in it. So I relaxed and went down and looked at it and said the dart looks really good. It's on the far side with lots of meat. It's not going to come out. So then he stayed on the surface and calmed down a little bit and pulled on it and broke the kelp loose because he still was too excited to dive down 18 feet. He got three different world records. He did it and he admitted it that he did it because he spent more time in the water than other people. He said you got to spend a lot of time and wait for the record to swim by you and be prepared to get it. Have the right equipment. And he did all of those. He just didn't do the part of being physically fit---

Ashleigh: Holding your breath.

Bill: Hold your breath and make deep dives and stuff like that which was more

¹³ Website listing Bottom Scratchers members: www.underwaterhunters.com

important to me.

Ashleigh: That's really interesting.

Bill: I'm very curious to know that that is accurate that he was in the Bottom Scratchers. That makes sense as being the right time. But there's also something that could make sense that it's totally wrong.

Ashleigh: Yeah, well the unfortunate thing is that the official dive club log book for the Bottom Scratchers---

Bill: This part is not true at all. He did not die in 1960.

Ashleigh: Yeah that didn't seem right to me.

Bill: He's been to my house. He disappeared around that time. But where he disappeared to, he was a-- worked on ships, he was a licensed mariner I guess you'd call it. So during the Second World War, I'm not sure he was old enough to be in that, but he worked on ships I think during wartime. Anyway he told me where he was, but before I tell you that part-- when he used to dive with me, he was the captain of the barge that dredged Mission Bay out in the '50s, and he would work in the morning and then in the afternoon he'd get off work and come by and pick me up and we'd go diving off of Alligator Head and I was with him when he got that bluefin tuna record and I think I was with him when he got the white seabass. That was a little bit harder to remember. But where he disappeared to, he went to Kingston Jamaica and he was doing managerial work on the docks there. I'm not quite sure what he was doing. But he did talk to me about it and he said he had a lot of Jamaican men working for him but it was very hard to get good work out of them. That they were a little bit disinterested in producing things. And then he came back to this area and he was living in Mexico and Barbara Allen ran into him. Check this out. Barbara Allen ran into this guy who said he was an Addict and he was living on the beach in Bahia de Los Angeles and so she talked to him and she came back here and said--

Ashleigh: I found Al.

Bill: That he was, he really knew a lot. It sounded like he was the real thing. I'm not sure she knew his name when she came back and told us about it but we said it sounds like Al Larson or else she said it is Al Larson, but anyway we decided that Al Larson was alive and then he showed up in San Diego because his service in the Merchant Marine gave him access to the Veterans Affairs, the veteran hospital. And he was coming up, he was living in Tijuana at that time and he was coming out to La Jolla veteran administration for his health checkups. And he looked me up and I remembered having a couple nice conversations with him. I took him one day, we were going to go for a walk. I had time, I was retired. I was walking occasionally with some friends. We'd go to Torrey Pines. We'd go to General Atomic, park in our old parking lot and then walk in the Torrey Pines area or the college, the eucalyptus trees. We would walk there. And I did not realize his health condition and I said well,

I just told my friends I was going to walk with them, do you want to come with me? So I took him in my car and we walked from the parking lot, we didn't even get to Genesee and he was winded. And he couldn't go any further. And he said go on, I'll just go back to the car and I said, no no, I'll go with you and told my friends we're not walking with you today. So I got him in the car and we drove all through La Jolla, all along the water and talked about diving and stuff. And I guess, so that was an interesting time. And then he came in the next time and he was a lot healthier and he had some bypass surgery done. So he was healthier.

Ashleigh: Feeling better.

Bill: And then he never came back to my house anymore. And I don't quite know why. And so I'd rather not speculate why. I don't know if he died, or if Tijuana is a dangerous place. I don't think he really lived in Tijuana. He lived down-- the way he explained it was on the south of the bullring in that area going towards Ensenada. But not too far. There's another community...

Ashleigh: Like South of Rosarito Beach?

Bill: It could've been in Rosarito. Yeah, because when he was coming up here he wanted me to come down there and visit him. And I don't like going into Mexico near the border. I only like going getting through there as quickly as possible. So I never cared, I never tried, and he didn't give me a good map of where I was going to go. He said well, go to the drugstore and ask them about me or something like that.

Ashleigh: This was before the Google Maps.

Bill: And it just seemed too dangerous to me. So I never followed up on it. So some people are sensitive and maybe because I didn't come visit him after he visited me three or four times he just stopped it, or maybe he fulfilled his interest in seeing an old friend.

Ashleigh: I wonder when he initially, in 1960, when he---

Bill: When they say he died?

Ashleigh: I mean, was he trying to disappear? Did he want nobody to know where he was? Was that intentional, or did he just, was that just the way it happened? What do you think?

Bill: That would be the way too much speculation.

Ashleigh: Right. Because I know he was quite the character. I've heard a lot of stories about him. Wasn't he the one that stole a bottle of whiskey, ran, jumped off the pier...?

Bill: No no no, you've got to get that straight. He was not that kind of a character at all. That was Jim Jordan. Jim Jordan the deep diver, the breath holder. He used to

go-- I was just a high school kid and it sounded interesting but I didn't do it. He would go after he got divorced he'd go to Tijuana and hang out at the bars and see the pretty girls. And talk about things that happened down there. But I won't go into those.

Ashleigh: That's interesting. I feel like that's something that Barb would follow up on, what ended up happening to Al.

Bill: Frank [Leinhaupel] has a more negative opinion of Al. And he may have talked to you about that.

Ashleigh: A little bit.

Bill: I've listened to Frank and they are two different people because I spent a lot of time with Al and Frank used to spend a lot of time with him. But Al accused Frank of maybe being the father of one of his kids and that is totally not true. But his wife was running around. Oh, that's an interesting story. She was probably running around with the doctor, a medical doctor. When I was in high school. And I had a dive where I speared a big white seabass, something on the order of 40 pounds which was big at the time and it hung up in about 45 feet of water off of South Boomer in the kelp. And I dove down to free it and I heard something going in my ear. I don't remember it being painful or what, it didn't last painful. It was painful when it happened, but it was a ripping noise.

Ashleigh: Like a crackling, kind of?

Bill: No, a ripping noise. And I thought I broke my eardrum. I came to the surface, left the fish down there. Came into the beach. I tied off my line to a float. I came in and Al Larson, I guess we were diving together that day, he took me home to his house, got a hold of his wife, that doctor that probably was messing around with his wife came and looked in my ear, told me I shredded my eardrum. I didn't hurt. I went home, told my parents, you know, I shredded my eardrum. So my mom made an appointment first thing in the morning with Dr. Mobius, a specialist in La Jolla. He looked in there, he said no, your eardrum is fine. What's happened is you had some wax that was hard attached to your, the ear canal. And the pressure pushed it in and tore the tissue, tore the skin and so the other doctor looked in there and saw the flap, the underside of the torn skin and assumed incorrectly that it was the eardrum. And cleaned up my ear and told me to stay out of the water for a few days or some period of time. And we got a fisherman, I don't know if it was a net fisherman, or a lobster fisherman. It would've been a net fisherman because it almost for sure was summertime.

Ashleigh: Yeah.

Bill: And he took us out to where my float was and either pulled the fish out or somebody else dove, went in and drove down to find it and it was still intact. In those days, this is interesting. In those days there really weren't sharks out there.

Ashleigh: Wow.

Bill: Never would see them except for those leopard sharks. And I would typically, if I was spearfishing, string the fish on my back and swim as long as I wanted with the fish on my back. In the competitions I would swim until I got enough fish that they slowed me down. Then I'd go to my paddle board and hook the fish onto the paddle board and get another stringer and go out and go but I did put the fish inside the board. Rather than hanging on the outside. But I wasn't worried about sharks. I had the impression that if there were sharks out there they knew I was there and they were not interested in me. Because I was swimming bait. Or not swimming bait, but just swimming. There were more occasional shark events to some of the divers that were more interested in game fish than I was, being in the kelp. You've probably heard of them. So, and I did know that there were sharks in the water because a friend of mine, Andy [Skief] was a gillnetter and he would catch shark. So we knew that there were shark, but they could've been the shark that came in at nighttime. You always would feel little bit uneasy about maybe being a shark there but my logic said that there were not. Nowadays people are seeing sharks a lot. I don't know why it has changed.

Ashleigh: This is kind of-- it depends whether I'll incorporate this or keep this for the oral history because it is so controversial-- but there is speculation that it probably has to do with the growing seal and sea lion populations.

Bill: Definitely. Oh, I'm sure, but that brings at least the white sharks to town. Now, I hear about the sevengill.

Ashleigh: Sevengills. I see them all the time now.

Bill: Did they pull a small seal, harbor seal?

Ashleigh: Actually, a friend of mine who runs a shark diving guide business, he takes people out to dive with the sevengills in the Cove and he actually got a video of a sevengill regurgitating something and then after it swam away he looked at what it was and it was a sea lion flipper.

Bill: Sea lion or harbor seal?

Ashleigh: It was a rear flipper, but I couldn't tell from the video and I'm not sure if he knew.

Bill: Well, it doesn't matter.

Ashleigh: And it was pretty digested anyway.

Bill: It would be a lot easier to catch the harbor seal than the sea lion. When we were young divers there was a large group of sea lions that lived, that would raft out over the canyon. And I don't see that anymore and I did not see it for a very long time, but there was a time when we would see them regularly out there. And then

there was-- this is another interesting story that Bob Shea explained to me. He was a lifeguard and at one time he was a lifeguard at the Children's Pool.

Ashleigh: Right.

Bill: This was before they ever made the sanctuary for seals. He said that when they came to work there early in the morning there would be harbor seals on the beach and the captain of the lifeguards told them one of their jobs was to shoo the harbor seals off the beach. So back in those days apparently the harbor seals were using that spot as a rafting place but they weren't in the numbers they are in now. And when I dove, during that time I would only see a harbor seal in the water occasionally. I would see them rafting on the reefs at the minus tides just south of the seawall at the Casa. But those same guys that were rafting on the afternoon of the minus tide were the ones that were sleeping on the sand.

Ashleigh: And getting shooed in the morning. That is interesting.

Bill: But once the city started making the people allow the seals to stay on the beach as long as they wanted to, they moved in en masse. And they bred, I believe.

Ashleigh: Yeah.

Bill: They reached a steady-state and I think the sharks are probably out there at a steady-state situation also.

Ashleigh: Which is why more sightings are being reported more often.

Bill: And back when I was young and diving, not seeing the sharks, the steady-state population of harbor seals may have only been 10 or 15 and it was not enough for the sharks.

Ashleigh: For it to be worth it for them to hang out, yeah.

Bill: So that makes some sense with the sharks.

Ashleigh: Yeah. I'm very interested in those types of human-caused impacts. I wrote a paper at SIO for a Marine Law and Policy course with the intention of researching the current and historical pinniped populations and coming to my own conclusion about how I felt, you know, what position I take on this controversy about whether to protect or not protect mainly the harbor seals at Casa, but also the sea lions at the Cove because they are starting to haul up not only on rocks, but on the beach. The big thing with the sea lions is, you know, they are all living in a marine reserve. But how many fish are they eating? If we create this reserve and do not let people fish there...

Bill: Is anybody doing...

Ashleigh: A study? Not that I can find.

Bill: It would've been beautiful because the diving council was involved. I was involved in making that a reserve. And we argued about it and the diving council the serious divers came to the conclusion that it was reasonable to have the reserve, but it was important that we still have access to the ocean

Ashleigh: Exactly

Bill: At Alligator Head, because in those days Alligator Head came all the way from the top of the walkway and you could walk down there and it was a real good entry. Now it is broken apart and only the seals use it. So that's why the border turned, became where it is. But at that time, you could've, Scripps could've monitored the sea life and seeing how quickly it came back.

Ashleigh: And if they had been doing that, they could see if it's being degraded because of the seals that have come in more recently. But you can't go back in time. But you could talk to people at Scripps and find out if anybody did a study occasionally.

Bill: Yeah, I mean I think actually people at Hubbs-Sea World which is the research institution that gets funding from Sea World, I think they have done some work, but mostly just on like counting population numbers of the seals and sea lions. You might, you ought to talk to Jimmy Stewart.

Ashleigh: I know. I've been meaning to get up there to see him, but I've heard that his memory is not so great these days.

Bill: A little dementia?

Ashleigh: Unfortunately, yes. Right now I don't have a lot of funding to drive up and record and then transcribe interviews with everyone I'd like to. I kind of have to take priority right now with what is going to be included in my Capstone research project. We wanted wanted to get-- age was a top factor, but...

Bill: Just for somebody to try to find out if any studies have been done in there. That's not a big interview or anything. If the studies have been done, then you know enough to tell somebody to look. You might even have a younger graduate student that would find out that boy, there were studies done in the 60s, and then it started in the 80s, and...

Ashleigh: Maybe it could be a PhD thesis for me, who knows.

Bill: So that would be interesting. Jimmy Stewart, he was in the Bottom Scratchers.

Ashleigh: There we go. Yeah, he-- let's see, Jimmy¹⁴ was 1951, he joined.

Bill: Yeah, '51. And he knew me, we knew each other but we never dove together. It was just, I don't know, probably because of my activity in the diving council and finally getting reputation of being a good diver. I remember talking to him about the shallow water blackout after, but this wasn't until I think 1970. So it had very little effect on everything I've told you before about myself. But he helped me to understand it more reasonably. And that was interesting. Speaking of physiology, I guess, this is interesting. You remember them talking about me being a deep diver?

Ashleigh: Yeah.

Bill: That was probably because I was very relaxed in the water. And my eustachian tubes were almost always open, so I can clear my ears easily. So when we did this test, we dove-- I told you earlier, not on this tape-- about going off the Marine Room with our paddleboards and getting into a little branch of the canyon and dropping a **sash way** down the same lines, so it's a hard line that goes really straight up and down. And we had ribbons tied at like 55, 60, 65, 70, 75 feet. And I would take a clothespin and dive down and put it on there and I could always go deeper than my friends. But I could only go as deep as my body would allow me to go. I would get squeezed and my chest was squeezed down to where if I went further I'd be going into a negative pressure inside my cavity. And as a 16-year-old, probably, having something like that happen, you don't know the physics of it but you know that it's real and that it makes sense not to. There is no pain associated, but it makes sense not to do it. To go down there. Well it's related to how big your faceplate is. The smaller plates let you go a little deeper. But that is important. Another trick learned was as you ducked down you could suck a little bit of air out of your snorkel so you had a little bit more volume of air in you. And then as I became-- by the late 60s I learned from John [**Ernst**], who was a top competitive diver, a concept called "packing". I don't know if you've ever heard of it.

Ashleigh: I don't think so.

Bill: I'll describe it and maybe you will know it from another name. It's not very useful unless it's really important. For some reason. And what it is, is you can take a full lungful of air and then you can use your mouth to compress one gulp of air down and swallow into your lungs and you can do this for another 10 seconds. And so you put some more air in there and you haven't compressed your lungs to the point where you're going to get an embolism, but I suspect you could do it. You could probably kill yourself doing that, maybe, because it would be like not plugging your air up when you come up. So you have added a starting pressure. And then you can go further before this collapse happens. So, I did, in 1970 I did make maybe two dives down to 90 feet of water, maybe just a little bit beyond. We were preparing for the national diving meet in La Jolla in 1970 and on the bathymetric charts, the contours, there is a rise off of Birdrock. About a mile and a half out there the water comes back up and it comes back into the area of 90 feet of water. We never dove

¹⁴ Jim Stewart, Joined the Bottom Scratchers in 1951, Nicknamed "Sheephead".

out there. I mean, we are free divers. There was no reason to try it out. Probably tank divers do it or something. I don't know. Anyway, looking for any edge that we could have, we went out there and we did it secretly because by this time we knew that we were the local guys. So the outsiders were all eyeballing us to see wherever we were diving. So Bob Shea was, he's in our club, he's a lifeguard, he brought a skiff out for Larry Redden and myself and we were diving on the outside of the kelp, or in the outer part of the kelp off of Green Street I think, with our paddleboards. And we climbed up into his boat on the windward side, so people wouldn't see it, lay down in his boat, and he took us all the way up to that spot. We figured nobody could see us and so we were more relaxed then and we dove out there and I did this packing so that I could get down to the bottom and I made two dives. I saw large schools of really nice kelp bass there. And I knew that I could spear one. I didn't know how tame they would be if I tried to spear several. Typically kelp bass wake up really quick. So I'm figuring no matter how good I am, I probably at the most am going to get three fish out of this. And the paddle to get there is going to take so much time it's totally not worth doing in a diving meet. But it was my deepest dive. And the other thing I realized from it, even if it had a lot of sheephead on the bottom, or a lot of good fish, you had to rest so long between those dives because a 90 foot dive you spend a lot of transport time and in order to have the bottom time you have to rest a lot longer between dives. And then the packing thing has maybe even a negative effect on your bottom time because your bottom time, your time really starts as soon as you stop breathing at the top. And the packing is not as efficient, it's just taking a breath and---

Ashleigh: You're losing the bottom time that you're spending packing.

Bill: If you spend 15 seconds packing it's like subtracting five seconds off your dive. So I quickly decided that it wasn't worth even scouting out there anymore. But that was sort of an interesting sideline to deep diving. And then continuing on with that, I did the-- being a good in science I was motivated to learn the mathematics of compressed gases and stuff and I could calculate out what volumes are involved in your lung capacity and stuff. And I worked it out. Even would try to measure my own lungs by taking gallon bottles and a hose, and kneeling down next to my bathtub filled up with water and taking a full lungful of air and blowing the air into the bottle to see what my lung capacity was. This was when I was already a graduate engineer, working as an engineer that I was making these calculations. And they all explained to me how, depending on your physiology, you run into this thing. And the people that dived really deep, they have, they are able to let their lungs collapse really close together and then there is no stopping because they really can go down to zero except for your sinuses and I think they wear goggles to get rid of that. This part is a little bit funny. When you are doing that you don't want to try what I did, blowing air into a bottle. Often, I mean, I didn't do it too many times, but at least twice I would basically pass out. Because I don't quite know why it is, but you are blowing and you are-- so you don't have any air left and you are trying to get the last bit out and the lights just go off and then you start breathing again. So, not a good idea.

Ashleigh: All in the name of science, right?

Bill: Also on science, trying to improve the spear gun. There was a fellow named Ron Church. I know you've heard of him. This was one of the early guys that got in the diving club a little after me. And he was a top diver at the time. Came from the LA area. And he started building guns like Al Larson's, showing him how to build and he actually designed guns. And he's much more...political. Or self-promoting. He wrote articles, and so one of the articles he wrote-- got into a national magazine I guess, not a mainstream magazine-- was how to build an Addict gun because that is what we call them. An Addict gun was different than a Potts gun or a Bottom Scratcher gun because the handle was in the center, okay?

Ashleigh: How did that make the Addicts feel? It's kind of like giving away...

Bill: Well, he was in our club. Now, back then you wanted people to know what you had designed. Where the Addicts feel bad is that the Addict gun is now a commercial gun and never mentioned as being an Addict gun. People are selling the guns with the handles on the center and they are "so-and-so" guns. Some commercial name. It's like the patent is off and I mean we didn't have a patent. Anyway after he got that, the FBI came to his apartment one day and knocked on his door about, "Explain to us what this Addict gun is about," because back then the "addicts" were involved in heroin I guess. And we didn't get that concept that-- we knew heroin was something that if you took drugs and you took that you were hooked on it. We were hooked on diving, so it makes sense. So that was kind of interesting. Anyway, getting back to him, what I want to mention it is that he would go to the dive shop and get the surgical tubing and put it into his gun a length, and he would take it and he would pull it down as far as he was going to load it and then he would adjust it and do it again. And he would just, through physical force and feel-- the surgical tubing has an elasticity to here [gestures] that is real elastic to a certain distance. If you go beyond that you have to pull harder to get there because of the further you stretched it, but then it relaxes and goes back to basically the force that you got to here. Okay so this is sort of a dead space. You do not want to put it on your gun in the dead space. You want to lengthen the surgical tubing and pull it right to the edge of that. Well, I knew what he was doing as a high school kid and then when I got really serious about competition and wanted the best I could have, I ran tests in my garage figuring out the rubber and the dimensions and I did curves and so for a given spear gun, given length and the length of your wishbone and where you had your notches for the thing told you how long you wanted---

Ashleigh: So you could calculate the ideal length of the surgical tape whereas he was doing it by feel.

Bill: Yeah, he showed-- basically cued me in on that. But I used quite as much of my abilities as an engineer to the problem of being as good a spear fishermen as I could be.

Ashleigh: Yeah. Well that's an interesting observation that actually just occurred to me and I wrote it down because I definitely want to mention it in my paper. Because I've noticed it's very interesting, the jobs and the careers of most of these successful

spear fishermen and free divers. I know Frank [Leinhaupel] is an engineer as well, and that played such a big role in the development of new gun technology. And then, like Al being a mariner, and I think Jim Fallon was a fireman, and Bob Shea being a lifeguard, all of that physical activity and alertness...

Bill: And Jim Jordan, this is interesting but I don't think you've ever heard. He came from the southern part of our country, the Southeast I guess?

Ashleigh: Just the South like Alabama, Louisiana, Texas?

Bill: Not Texas, but anyway. He came and he spent years being both a boxer-- I think a little bit of professional boxing, he was a big strong fellow-- and what now I've heard is called noodling. You know what that is?

Ashleigh: It's for getting catfish.

Bill: He told us about it and we'd never heard about it.

Ashleigh: It's really strange.

Bill: Finally I started seeing it on the Internet, or on cable TV. But he would tell us how they'd be in dirty water, you know, just like what you've seen if you go down with no faceplate or anything. They had to hold their breath and they reach under these things and grab the fish and it would hold them down and they'd work it out. So he was relaxed in the ocean. He comes out to California and he's a natural diver because he's been diving without a faceplate, but he's been holding his breath. So that's something that people don't talk about. But Frank [Leinhaupel] will probably know that it's true. But I bet Barbara Allen doesn't.

Ashleigh: It's so interesting. Yeah, when I interviewed-- I bring it up just because the most recent oral history I recorded was with Chuck Mitchell who worked for Scripps. But he got into spearfishing when he was a kid, used to spear fish around the mouth of San Diego Bay. He grew up in Point Loma, he went to Point Loma High and Jack [Prodanovich] was his custodian although he didn't talk to Jack too much at the time. He became really good friends with Jimmy Stewart later on. Anyway, him and Paul Dayton-- who is my advisor for this project-- they were talking about how they've noticed the kind of training that recreational scuba divers get these days make it so basically anybody can dive these days. It's almost to the point where you've hardly even got to know how to swim and you can...

Bill: Mass production. They want to sell you the equipment.

Ashleigh: Exactly. They were talking about how back in the day before it was mass-marketed like that, you had to be good in the water. There was no way in hell you'd be a diver if you were not a waterman first.

Bill: Yeah, for years I would have people come talk to me about wanting to dive. And they'd, I'd always try very hard to steer them away from the dive shops. And

that tank thing. I'd say all you need is a faceplate and a snorkel. That's all you need. And the warm water, the summertime. And go out and swim around with that. Go and get a pair of fins, that's the next thing you might do. And then find out if you really want to be in the water or not. If you don't feel comfortable and don't want to do it, don't buy any more gear. But the dive shops will take you and tell you you need all of this gear. You come to our pool and we'll train you and we'll collect all this money. Then we'll take you on ocean dives. And they don't say this, that then you're going to find out if you really want to do it or not.

Ashleigh: Exactly. Exactly.

Bill: And they probably-- a lot of these people they know that they put so much into it they kind of feel obligated to do it. But they are not really liking it because it's difficult. So they dive a few more times and they stretch the dives out, the time between diving, and finally they just give it up. It's a shame.

Ashleigh: Yeah, definitely. I completely agree. I've seen a lot of it happen. It was because I was so interested-- all I want to do is dive.

Bill: So you understand.

Ashleigh: So I understand. I'm a third-generation San Diegan. I grew up going to this beach every day when I was a kid because La Jolla Shores was my mom's favorite beach. Anyway, kind of my backup plan if I hadn't been accepted to Scripps, I figured well shit, the next best thing I guess maybe I'll be a scuba instructor. And I was immediately put off by the idea because of that fact. I didn't want to be-- you know, my passion and my life's work, I didn't want it to be training somebody from nowhere near the ocean who is going to go dive a couple of times and who doesn't even like it. Or the couple that is going on vacation to Aruba and the girlfriend doesn't want to dive, but she feels talked into it. And it's just so turn and burn. And the types of-- because you know these days no matter how good you are in the water sometimes you need those cards to dive certain places or buy air, so you've got to go through these certification processes and I've always been surprised at the pretty mediocre level of actual training you are getting. And what you are being taught. Especially the type of safety training. There's pretty much none of it. And that leads to accidents. Diving is dangerous.

Bill: This has nothing to do with diving but it has to do with what you are talking about. People can buy guns with no training. I took up deer hunting, I don't know, maybe in my late 40s. I don't know quite when. I had this concept that I liked to hunt underwater and when I get older I'm not going to be able to do it, so maybe hunting with the gun I can walk around and do it. So when I went to get my hunting license I found out I could buy the gun but I could not have the hunting license until I had a hunter's safety course. So I go to the hunter safety course and it wasn't hard to sit there and listen to it and get the experience of all that. I don't have a problem with people buying guns. But I wish they had to sit down with a gun safety course before they could do it. I didn't have to have a gun safety course to buy the rifle. But to take it out to shoot an animal-- if you want to take it out and shoot

students at your school, you don't have to have a safety class.

Ashleigh: It's insane.

Bill: It's crazy.

Ashleigh: Anyway just to save some time so I don't keep you here all day, do you want to move ahead---[end tape]

[At this point we began looking at some artifacts that Bill brought for Ashleigh to photocopy. Stories about the artifacts will be transcribed at a later date.]