

Molly Graham: This begins an oral history interview with Craig McLean for the NOAA 50th Oral History Project. Today's date is July 11, 2022. The interviewer is Molly Graham. It's a remote interview with Mr. McLean in Olney, Maryland, and I'm in Scarborough, Maine. There were a few things from last time that I just wanted to revisit before we trace your diving roots. We had spoken about the social and cultural movements that you witnessed during the late 60s and 70s, particularly with the race riots in New Jersey during the time, but you were born the year of Sputnik. I was curious if you watched the space race and if you remember the moon landing.

Craig McLean: Oh, yes, clearly. With only two children, my parents were very desirous to treat both my brother and I equally. It seems that whatever toy came home, there had to be two of them so that we wouldn't squabble over it. I remember crawling around the living room floor with a space helmet on, a play space helmet. I quickly converted that because the other toy that came in around [then] was a set of twin diving tanks and a plastic double hose regulator that you could strap on your back. I quickly converted the astronaut game into an undersea game. I would put the tanks on, and I would put the space helmet on and make believe it was a diving helmet. I've always been in the middle of that tension of space and sea, and sea always has won out for me. But the Sputnik part of it eluded me; I don't have a conscious recollection of the tension with Russia in particular. I do remember the drills that we would have in my grammar school, kindergarten, first grade, where we would go to the lowest floor of the school and seclude ourselves. It was a bomb shelter, or the best we had. But it was not front of mind. I don't think I really understood the potential calamity that the nation was dealing with. It was above my conscious level of assimilation. My parents, I don't believe at all, raised it around the dinner table. I would guess they just didn't want to alarm us unnecessarily. But we did have to do the duck your head, hide under the desk, and then get down to the basement of the school, which really was not very deep in the ground. So, that was part of it. The space part was just exceptionally exciting. I think the entire nation rallied around the black and white televisions to watch this all happen. My memory is now going to be artificially augmented by several books that I've read because I've tried to understand the American psyche as to why space is so important to America but the oceans don't seem to be of equal importance other than casual recreation two weeks a year on the coast. It occurs to me now, but it's not really a fair reflection for me at the time. I didn't understand how charismatic and how different Jack Kennedy was as a presidential appearance, a persona of a different generation, a mold-breaker, and a number of attributes that Kennedy brought that were so different. I just, as a little guy, admired him as the President. In fact, I remember my mom trying to get my brother and I to eat our eggs in the morning because we'd much rather have sugary stuff that all kids enjoy. I remember her calling them Kennedy eggs to inspire my brother and I to want to eat them because she told us, "Well, the President eats them this way, so you should eat them." I do remember that. So, there were inspirations in the house. The lunar landing, I remember listening to it. I believe we were on vacation for one week a year at the Jersey Shore. Every beach blanket had a radio tuned to that landing and listening to it. I can't honestly tell you whether we listened to it live or whether it was the recording, but everyone seemed to be on it, and then this roar of cheer just erupted across the beach. So very much front of mind – spirit of exploration, admiration for those heroes, and little did I know that I would one day get to join a group of divers that had outer space people as well and that Scott Carpenter and Buzz Aldrin would be members of that group. It's called the Sea Space Symposium. Kathy Sullivan is a member; you might have interviewed Kathy. There

are quite a few folks around – Sylvia Earle, another member. But these heroes of mine when I was a kid and coming to meet them in life later was just absolutely stunning for me. I have to say this about, in particular, Scott Carpenter. If, in a more advanced age, I could have such grace as that man held, I will feel accomplished in my life. He was an amazing human being, Scott. Technically, Buzz could do the equations in his head to figure out how to land successfully on Mars. They're just amazing people.

MG: I don't know why this popped into my head, but who was your football team growing up?

CM: Now that'll be a distinction between you and I, quite possibly, because you're a Long Islander, but it was the New York Giants. I did enjoy watching the Cowboys and the Packers, but the Giants were the home team. That was my first football game. Because we didn't have a lot of access or a lot of funds, my dad was offered two tickets to a Giants' home game by a workmate of his. Instead of going with us, he asked the workmate if he would take my brother and I because we couldn't get a third ticket. That's how my brother and I got to see our first professional football game. I didn't see a professional football game for decades after that. But it was thrilling.

MG: The other thing I wanted to ask you about, and perhaps there are connections to what you would later encounter in your career and considering the lessons your father taught you about doing the right thing, was the Watergate scandal. Was this something you dissected as a family or talked about?

CM: Oh, yeah. It was interesting to watch the CNN broadcast recently about where America was and the perception of the CNN broadcast, of course, coming from John Dean who [was] front row center – he was there – was that most of the networks – and gosh, I'm trying to remember the lady's name. She, early in her career, was covering Watergate, and she's now a highly regarded television journalist, in addition to [Bob] Woodward and [Carl] Bernstein. We were of that minority of Americans that were following that stuff because it disrupted the house. It was something that was not good; [we] knew it was not good, smelled a rat, and wanted to figure out just what was going on. So we followed what the TV – I think CBS was the major [network] that was really covering it. The others were just kind of letting it go until the great revelation of the Oval Office tape recordings, etc. But I was following it in our newspaper. We followed it on the ten o'clock news as well. Very mindful of it.

MG: I want to hear more about your introduction and interest in diving. It sounds like your interest in diving was innate; you didn't have a choice to end up doing anything else. Can you talk about the confluence of factors that inspired you? In your survey, you mentioned Jacques Cousteau and Diver Dan, whom I hadn't heard about.

CM: *Diver Dan* was a television show. If I remember correctly, it was a hard hat diver, one of the big Mark V brass hard hats. There were shows like *Flipper*, which started as a movie and then, I think, morphed into a steady, weekly TV show filmed in the Florida Keys of all beautiful places. These shows impacted me with the quest for adventure and the desire to see what was underwater once I saw on television what was underwater. My mother always told my brother and I, probably a reflection of her origins and roots, that, "You can be whatever you want to be.

If someone else can do it, you can do it too. You just need to apply yourself.” So the TV influence – it really was the TV influence, the weekly Jacques Cousteau. The family would gather around the television; it was black and white for us. I think they might have been broadcasting in color, but we had a black and white TV. Just watching this whole spirit of adventure – it coupled being on boats, growing up on a river, [and] my dad having been Navy. It wasn't like he spoke of his Navy experiences at every dinner, but it was something that was not unknown to me, the fun stuff that they had and just the life at sea, which sounded fun. Then going to New York to visit ships and walk aboard ships and see what they were like. It all to me, I guess, came together with an ambition of saying, “I think I'd like to do that.” The more I learned of it, the more I liked it. For me, the diving [toy] was one of the coolest toys we got. I think this is a time when I actually got something, and my brother got something different. We had this battery-operated frog man who would kick his legs and propel himself. A bathtub is only so big, and this toy was about two feet long. We put it in the river behind the house. I remember watching it go underwater because it would go up and down – it would surge. So I watched it going down, and I'm thinking, “Well, it didn't disappear. There's something under there that this frogman is going to be bumping into. He came up, and we recovered him, and it was all a great adventure. Little did I realize, years later, I'd be doing that kind of zero visibility diving and trying to try to make my way around. But as a kid, it just all came together – the boatyard next door, what was on television, which makes me realize we are responsible for educating youngsters with exposure. We don't have to formally educate them on oceans but give them that healthy exposure. Shark Week comes along, you watch some guy with a chainmail suit stick his arm in the mouth of a shark, then you see the next thing where somebody's trying to beautify our understanding of the ocean world, then another story [is] talking about the doom and gloom of oceans. There's so many messages today that are being projected to young people about ocean and ocean-relevant subjects, and it's not a consistent message, which – I don't believe in mind control, but it's a scattered message, and it's really hard to pick the attributes one is looking for. Whereas, for me, the thrill was presented consistently – the thrill, the new discovery. That just hooked me, and I don't think I'm alone. I think there's a ton of people that are working in this field in NOAA in particular and people who are even older than I am, who were recruited to this coupled generations of folks working on oceans.

MG: Can you clarify the connection between wanting to work on boats and also being interested in diving? Were you thinking one would be a vocation and the other an avocation, or that you'd find some way to combine the two?

CM: I don't think I had the smarts as a kid to figure out how to put those two together. When I was eleven, when I was cruising around on my boat in the river with people falling to the left and right of me, I had the ambition to be a deckhand on a research vessel – eleven, twelve, in there. I thought that that's what I could reach given where I was [and] where I'd come from. Never did I think that I would have the kind of career that I've been able to have. Notwithstanding my mom's admonition, that was beyond me. Special people got to do that, not normal people, and I figured I was kind of normal – shy, but normal. It was something I always wanted to do and never really parsed it out into an avocation versus vocation. I wanted them, I guess, both. A better way to put it is I wanted to do that work. That's what I want to be doing. I don't want to just be recreationally diving. But at the age that I started diving – first of all, that was a thrill when my father said, “Yeah, we can do this. But here's how we're going to have to do it.” At

that point, at fourteen, I knew that had to be just a recreational pursuit. How could I blossom that into a working pursuit?

MG: When he said, “here's how,” what did he mean? Did you go to dive school? What happened next?

CM: When we would visit, what turned out to be, what I'm told, the country's first mall in Paramus, New Jersey – it's about a twenty-five-minute ride, a twenty-minute ride from our home where I grew up – we would pass a place on the highway. [We] would drive from Rutherford to this small little town called Rochelle Park. At the dive place, my dad would always call out, “Hey, there's the dive place.” If some fellow was – or lady, but it was all guys back then, I think. I met the few ladies who were involved in it later on. But a guy's pulling a dive tank out of a trunk – “look at that” – as you zip by it at fifty miles an hour. It was always there. I don't remember detailed conversations with him about that. I just remember his concluding that “If you want to do this, you're going to have to get a job. I will drive you to the place. But you've got to pay for it. You've got to find a way to pay for it.” At the same time, when my job materialized, he said, “You got to think twice about this now. You're going to be working for the rest of your life. So just make sure you want to start now.” He started when he was fourteen because that's when his dad died, and he had to help with the family income. We didn't have a lot of money, but we weren't that disposed to need that I had to work. Certainly, anything I worked for didn't go into the family treasury as it did for my dad and for my mom. Whatever I earned was money that I would have to save for college or whatever else I wanted to do. So he said, “If you get a job, I'll drive you. We can make this work.” I think, prior to that, we stopped in to this dive shop, inquired as to whether or not I was too young or not, and actually, the man who handed me my diving certification, a fellow named Ken Liggett, is still a friend today. That's over fifty years ago. They said, “Yeah, okay. Fourteen. Given your size, yeah, you could do this.” The part that I forgot about was that I would get a junior certification. Then I was supposed to go back when I think I was sixteen or something like that to get the adult certification. I forgot all about that. I lived for probably a decade beyond that with what was called a temporary dive certification because my diving number was T – and then it had four digits, so I was one of the early thousand kid divers, I guess, in the United States, at least by that certifying agency. Later, I was working in the dive shop for my summers. I was doing boatyard work and diving. Only then did I realize, “Holy smokes, I don't have a legitimate diving certification.” So the owner of the shop said, “Well, based on where you've been, I wouldn't worry too much about that. We'll just file the paperwork. Don't worry about it.” So then I got a renewed certification. But my dad said, “Yeah, I'll make this happen, but you have to get a job.” I started at fourteen. We were moving boats. We didn't have travel lifts. We had a cradle that had right-angled steel wheels, and we would place those wheels on railroad tracks. We had to drag and align the railroad tracks to be parallel. You would jack up the cradle, move the tracks, put the cradle back down, move it left and right, and then if you wanted to go forward and backward, you had to jack it up again and then put the railroad tracks under. So I'm a kid slugging these railroad tracks and large jacks around with a man who had been doing this work for his adult life. I had wonderful mentors that kept me safe. I'm going to guess we were probably violating a few child labor laws there. When we painted or when we did fiberglass work and you got that stuff all over you, the common thing was to clean up in gasoline or toluene or any of these carcinogens. That's just the way it was. I enjoyed the work every day. I just felt

thrilled that I could work in a boatyard. It's the place I played when I was a kid. It occupied four or five property lots along the river, right next door to my house. It had been a boatyard since the '20s. Today, as I go back there, it's now half a park, and the other half is a rowing club that has the property now. It was a well-regarded place because it had indoor storage, and in the temperate region, being able to store a boat for winter undercover is a pretty good deal.

MG: Was this a recreational boatyard?

CM: Recreational boatyard, yes. We did not build boats there, but we repaired boats. I remember spending an entire summer underneath a 1938 Elco. Elco eventually went on to build PT boats, patrol torpedo boats, during World War II, but they also built some very nice luxury boats. This older boat – 1938 – was in need of refastening. A wood boat is constantly working, the wood attachment to the ribs loosens up and needs to be reattached at times, or you just basically destroy the boat and move on. For this elegant antique, if you will, even in the '70s, I spent the entire summer refastening the hull with one other man who was the fellow who had done this all his life. One of us would be inside, one of us would be outside, and we just went rib by rib, attachment by attachment, putting in nuts – literally, nuts and bolts. We didn't re-screw it; we bolted it back in. The boat owner gave the boat to his son, and his son put the boat on the rocks up in – Molly, not far from your home in Long Island, coming up through – actually, out at Montauk, really, at the Race. [Editor's Note: "The Race" refers to the channel of water between Fishers Island and Little Gull Island in Long Island Sound.] The owner said to me, at the very end of the summer, as I was getting ready to go back to school, "Do you want to be doing any work part-time? I could send you out to Long Island and see how bad that thing went." I said, "To be honest with you, sir, that just breaks my heart. I don't know that I ever want to see that boat again, understanding what happened to it." So it was, at times, a labor of love, and, at times, just the frustrations of the real world.

MG: Can you tell me a little bit about the boatyard owner? What was his name? I think you said he was a World War II veteran. Did you get to know him?

CM: He was a World War I veteran.

MG: Wow.

CM: Mr. Grenville, G-R-E-N-V-I-L-L-E, Richmond. He was always Mr. Richmond to me. His two sons lived right across the street from the boatyard. He lived across the street from the boatyard as well. His one son worked for a high-tech company, ITT. And his other son helped him to run the boatyard. As their business grew, they eventually branched out to own a boatyard on the Hudson River. Gren Jr. ran the Hudson site. Richmond Sr. ran the site that was in Rutherford. But the way my mom raised me, Mr. Richmond, the senior, was always "Mr. Richmond." Then there was "Mr. Gren Richmond", who was the son and ran the other boatyard. Then there was "Mr. Don Richmond". I just always assumed that was their name. I don't know how old I was before I realized, "Oh, yeah, that's their first name. That's how we distinguish them." But manners were always reinforced with emphasis inside the house. So Mr. Richmond Sr. was the closest I had to a grandfather generationally, but also just as a kind soul. He was rough and gruff, self-determined. He walked around with a broken back for a good portion of

his life. Never had the medical remedies for it. He just gutted it out, toughed it out, and at seventy-two he was worn. He was born in 1900. As I looked at his physical condition, as I knew him through that decade, from '70 to roughly when I graduated college, his body had wear and tear on it that my friends today, who are seventy-two, have not experienced. I don't know his upbringing. I don't know his origins and roots, but he was so kind to me. Being a knuckleheaded kid, you do stupid things. He just tolerated it all, and just gave me a little bit of guidance. It wasn't things on the job. It was things like, if I'm going to be away for the next week to go to the beach with my parents, I didn't have the smarts to tell him well in advance when that was going to come. So the first time that that sprung around, it was maybe two days before we were leaving. I didn't know any better. He just patiently explained to me, "Okay, that's fine. I'll miss you for that week. But next time, just let me know in advance." I remember that conversation, and he did it with such, I'll call it, grace. He was a tough guy, but yet, a kind guy because every day that we would go to the Hudson River Boatyard, which came later in my work time with him, we'd stop at Dairy Queen, and he'd buy me an ice cream cone, have one for himself, and away we'd go.

MG: So would you come back there to work over the summers while you were at Rutgers?

CM: I did. Then I started halfway through, working in a dive shop. That's where I got exposed to the working side of diving. But summertime in the boatyard was enjoyable. As I got older, I spent more time on the Hudson River side. That's how in 1976, I got to see Operation Sail run up the Hudson River with all the tall ships, the celebration of our bicentennial. I wasn't part of the inner crew, if you will. There was a crew that worked there full time. I would come along with the senior, and we would do a handful of things. Maybe we had a customer that went from the Rutherford yard to this Edgewater, New Jersey yard, right below Palisades Park, where Palisades Amusement Park used to be. It was a tough town. It was a rough town. I remember watching a kid basically do the backstroke – sidestroke, I guess, is really what he was doing – with a stolen television on top of his chest. One of the guys who had his boat in there – we had everything in that yard from wealthy corporate boats of a hundred feet, hundred-plus-foot yachts, to local guys with local boats doing local things. So this one fellow runs in and gets a BB gun, and he starts shooting it. He was local. The kid was local. He starts shooting at the kid with the BB gun because he's stealing a TV. A kid broke into the boat, stole the TV, and he's going to swim into the Hudson with this TV. [laughter] I laugh at it now, but at the time, my eyes were wide open. "Get the kid. Shoot at the kid." The kid dropped the TV and swam out of the yard; who knows wherever else he wound up. Yes, that was my summer job. We also worked to cover the boats for winter because not every boat would fit underneath the sheds and the overheads. I would get picked up during Christmas break to help cover the boats. That was cold. It taught me – that, working underneath the boat, painting hulls, having grit drop into your eye even though you're wearing goggles, all that sort of stuff gave me a sense of appreciation for what our crew members did later on when I was working on ships. Whether I was an ensign or whether I was a captain, I would stop and talk to the guys and just be able to relate to the difficulty of their job and to let them know I understood it because I had done that sort of work as a kid, not to demean what they were doing but to identify sympathetically with them that I know how hard this stuff is, and I respect you guys for doing it. Yes, that was my job.

MG: That must have been such good on-the-job training to prepare you for your NOAA Corps experience.

CM: I think it was because it certainly wasn't like I came up through the yachting circuit.

MG: I found Mr. Richmond's obituary, and it said he lost one of his sons in 1975. Did you know what happened or know him during this time?

CM: Certainly did. Yes. That was Mr. Don Richmond, who succumbed. I believe he had cancer. His wife was just a lovely lady. All the Richmonds were just wonderful, wonderful people. They were like extended family in the neighborhood. But Mrs. Richmond stayed in the area and their two beautiful daughters, who were just lovely friends of ours, Michelle and Donna. As we were growing up, they were schoolmates and always well-respected young ladies.

MG: Can you go back to your junior certification training? What was that like? What did they have you do? I'm curious about some of your early experiences. I think you mentioned sewage barges and things like that.

CM: Well, the experience was – as I say, I was a pretty shy kid back then. I got over it partially through diving. I showed up for my lessons. I don't know that anybody inside of this group of maybe eight people knew what my age was; they just knew I was younger than they were. The way that this place worked was pretty unique. They actually had a pool built into the building that was part of this diving retail and training center. So we didn't have to go to, as people might often today, go to a YMCA or a community pool in order to learn diving. There was quite a flow of very interesting people that came into this place because it was the first dive shop right outside of New York City. A guy who I tremendously respect – and I think the rest of the world does too – for his underwater photography, a *National Geographic* photographer named David Dublilet – would come into that shop. Not during the course of my lessons, but later on when I was working there, did I get to meet David. It was a real chuckle for both of us when we wound up bumping into each other at the *National Geographic* building, he working there [and] I visiting there for business I was doing for NOAA. But going through the diving lessons, everybody's older than me. There were some women in the class as well, that I remember, which I thought, “Hey, that's pretty cool.” Even as a fourteen-year-old kid, I thought, “Hey, that's pretty cool that we have women in here.” But when it came time for the open water dive, I got separated from the cohort that I was going through in the classroom and pool work. Let me [digress] for just one moment. I couldn't wait to stick that regulator in my mouth and go to the bottom of the pool. I remember that when we were equipped, we didn't get the “go” word from the instructor. We're supposed to be kneeling at the shallow end of the pool. I just leaned forward, followed gravity, and I went to the bottom of the pool, and came back, and got scolded by the teacher because the instructor did not tell us to go to the bottom of the pool. He said just put the gear on and kneel down and breathe. That was step one. Can you just kneel down and breathe and get used to being surrounded by water and breathing underwater? So I took it to a bit of an extreme. When it came time for the open water dives, I really lucked out. I think if I had gone through with the group I was trained with, things could have turned out different. But I met these absolutely marvelous guys. The first fellow was John Liptak, L-I-P-T-A-K. His dad [was] also a World War II veteran. John was a Vietnam veteran. He had recently come back

from Vietnam. He didn't talk a lot about what his experiences were in Vietnam. John was also a drummer. So we had that in common. John told me he got to play in the Filmore East once, which was a big deal if you could land in the Filmore. He said, "Well, why don't we get together? Since we're all certified, why don't we get together and find some places to dive?" So John would pick me up at my house. My mom would make the lunches for everybody. And everybody was four of us because there were two other guys in here who John knew and he introduced me to. One was a guy named Ray Meenan, and the other was Jack Kelleher. Unfortunately, I've lost touch with John over the years. Both Jack and Ray have passed on now, but they remained, throughout the course of their life, friends. We traveled internationally to dive together recreationally. The jokes, the sense of humor – Jack Kelleher's sense of humor was just one that influenced me and helped me develop my own. He was just an amazing guy, but all were good divers. So at fourteen, we were diving in quarries and lakes. I actually pulled out my logbook. I don't log my dives anymore. I just got lazy and stopped doing that a long time ago, but the early times, I was logging all my dives. Leaving quarries and lakes, John said, "Hey, I found this guy." He was a dive boat skipper, and he runs a dive boat out of Point Pleasant, New Jersey. His name was Pat Yananton, Y-A-N-A-N-T-O-N. Pat is a friend still today. So Ken Liggett handed me my dive certification, still a friend. Pat Yananton, years on his dive boat – still a friend. Jack and Ray were friends until their demise. So we went out on his boat, and we dove on a ship that was called the *Cadet*. I don't believe that was the real name of the ship, but it's two miles straight off of Point Pleasant, Manasquan Inlet, and it's about a sixty-foot dive. It was just the skeletal remains, just the beams, no planking left on deck or below, just the beams of an old sailing ship. Okay. That's it. No more quarries, no more lakes. We can fuss around all we want, but this is the real deal. So then it became wreck diving. That was the ambition. Where can we go next? If you could possibly come home with a souvenir, and I got a couple of them sitting behind me on those shelves – if you can possibly come home with a souvenir, that's a big darn deal. The first thing I ever found underwater – it's about twenty feet away from me – is a Schaefer beer can; it's an old Schaefer beer can. I found that in the quarry. Because it was an older label, to me, that was precious. Then we got onto things like portholes and telegraphs and helms and whatnot. That was the diving culture. I later changed my ethic about diving eventually. Instead of pulling stuff up off the bottom, can we either donate it to a museum, which I've done, or do we just leave it in place. There are marvelous places to visit and dive, like the Thunder Bay National Marine Sanctuary in the Great Lakes, where that ethic predominates. My work with the National Marine Sanctuary system later in my career saw me evolving, and I would go to dive shows and talk about the idea that – "Hey, guys, we don't need to rip every bit off of the bottom. We could leave it where it is." The USS *Monitor* is a perfect example. If divers had just combed through the *Monitor*, there'd be nothing left. When we finally got to recover the *Monitor*, which is something else to talk about, it was a blessing that we were able to keep people off of the *Monitor* and not have pieces removed irresponsibly. Anyway, after discovering the *Cadet* and the thrill of finding things on the bottom, then the four of us – Jack, Ray, John, and I – in two cars – John and I together, Ray and Jack together – we would go largely to New Jersey on Pat Yananton's boat called the *Seafarer*. Eventually, I got a chance to serve as first mate for Pat on the boat, and that was a thrill. Once again, learning responsibility. Most of these people were older than me. But as we went through our dives and we visited a number of different shipwrecks, both sailing vessel vintage and then World War II vintage, John became a diving instructor and asked me if I would join in with him and help teach the classes. So I served there as an assistant instructor to John, and I'm trying to remember my age at the

time, but I was still in high school, so I was either seventeen or eighteen when I started doing this. I was teaching college kids scuba diving, and I loved it. It was a lot of fun. But then my – what shall I say? It's not elitism, but my sense of value then taught me there are guys who teach, and then there are guys who do it. This teaching thing is cool because I'm young and all the students are older. We had marvelous trips. We went up to Lake George and had a diving camp out for a week in a large MASH [Mobile Army Surgical Hospital] tent. The whole diving crew was up there, and we had a ball up there. But rather than the teaching thing – that's okay, but I want to go do it. I think John lost his interest in teaching as well because he had the same spirit, the same philosophy. “Yeah, this stuff's okay, but we're not going to make a living out of it, so let's just get back to diving and go for it.” So it was all shipwrecks. Everything about it was just shipwrecks. But in looking at the shipwrecks and looking at the quality of the water and understanding how dirty the water was coming out of New York Harbor, and then seeing how clean it was offshore, it always struck me to have an environmental conscience. Watching people throw things in the river in my backyard would get me angry. I then grew a little bit more of a conservation-oriented mindset, still seeking the thrill of shipwrecks. The capstone to that was diving the *Titanic*; that was just a mind-blower. The diving experience migrated as well as my own ambition for what to do with the ocean.

MG: When you are exploring these quarries and lakes, did the things you find tell you anything about human behavior? People dump things at the bottom of a lake for a reason.

CM: That was it, Molly. That was what it taught me is that people throw stuff in the water because it'll disappear. I got a jug. I have a pitcher. A water pitcher that was ceramic that was thrown into a lake in New York State called Lake Minnewaska. It was in Lake Minnewaska that we found a paddle boat. Somebody had gone out in a paddle boat. The paddle boat sunk. Four of us got together. One of the guys was a stuntman who went on to a career in Hollywood doing stunts. We got this paddle boat, raised it up on lift bags, and we brought it to shore and beached it. So the manager of the Lake Minnewaska hotel and lake – we didn't tell him about this water pitcher that we found, but we told him about his paddle boat. So he gave us a year's free admission. I was so proud of that. That was my first salvage award, so I framed it. It was in my bedroom as a kid when I was probably not much more than fifteen. The rest of the stuff was just detritus that people just chucked over the side. It was not really a lesson in anything more than that, just “Hey, I wonder who chucked something else out. Maybe we could find it.” And we looked at the fish; the fish were always entertaining – pike and other kinds of Central New York State type of fish. We pretty much grew out of that as soon as we got into the marine environment. You're looking at starfish and lobster and snails and all sorts of things, and the fish themselves. But the diversity of the marine environment was just absolutely delivery of what I had seen on television; only now, I was there. It was my mom's admonition: anything you want to be, you can be. One more story I forgot to tell you. In sixth grade – and there's a connection here. In sixth grade, the older brother of one of the schoolmates came in and gave a slideshow on his experience diving in Key Largo, Florida, at what then was the John Pennekamp Coral Reef State Park. I guess it still is, but now it's part of the NOAA National Marine Sanctuary in the Florida Keys. This man, Dan Mitchell, a great, great guy – Dan, the older brother of our friend, Joe Mitchell, a schoolmate, showed us this stuff. And I remember sitting there watching it, thinking, as my mom had said, “If someone else can do it, you can do it.” That was further inspiration for me to realize that this diving thing might not be unattainable after all. That was

sixth grade. I later met Dan again on Pat Yananton's boat because it turns out that they two worked together for a NJ pharmaceutical company. They were both biologists. Pat was a microbiologist. I can't remember what Dan was trained in. I dove with Dan a few times [and] told him that story. He was charmed by that story, to realize that he had an impact on a younger kid. We unfortunately lost Dan; he had some knee surgery, and through an embolism, a pulmonary embolism, the poor man died on the way to the hospital. Of all the different diving things he exposed himself to, something simple as that taught me as well. Life will not allow you to carry through with everyone that you came in with. That was a pretty disrupting loss. I wasn't that close to Dan, but just realizing how young he was, was very eye-opening to me.

MG: This is skipping ahead for just a moment, but I wondered if you encountered returning veterans from Vietnam at Rutgers and if there was a difference with those who served. Was there a presence of returning veterans on campus?

CM: I think I saw more of the ROTC [Reserve Officers' Training Corps] presence, rather than the returning veterans at Rutgers because I started at the time when the latter portion of the veterans, the diminished numbers, the drawdown numbers, would have been going to Rutgers. In no way would I diminish any of their experiences, but to compare that to good personal friends today, who I used to work for, people like Rollie Schmitten, who – I don't know if you've interviewed Rollie, but his would be a great interview. Rollie was a long-range reconnaissance marine in Vietnam during the Tet Offensive. Those guys were older than the crew that I saw coming into Rutgers at the time. It was kind of quiet. It was kind of quiet, I think, in the Rutgers time. That was the mid-'70s. It was *Rocky Horror*, and it was an expression of gay awareness. There was a Pride Day; it wasn't called pride at the time, but there was a Pride March and such. It was more of an eye opener for me, but not a lot of military presence. I had one or two friends who were in ROTC, but that was a tough time to be going into ROTC because there still was a disdained view of the military experience as the legacy of Vietnam.

MG: I'll ask you a little bit more about that when we get to the Rutgers chapter. I just wanted to make sure there's nothing missing from your early diving experiences. In your survey, you shared a story about diving while sewage was being dumped on you, and you caught it on camera.

CM: Well, the first time that happened, and where I got the inspiration for this was, Pat Yananton did that from his boat. Pat followed a sewage barge out. The barge dumped, and he got under it with a video camera, and he filmed it. I can't remember the details. I wasn't there with him then, but then, when I was in college, we had guys who were short dumping, and we were out on a boat. We got in a position, got underneath them, and were able to film that. Because there was a number of times when people were doing bad stuff. Short dumping basically is dumping before reaching a designated dump site. If you didn't want to steam all the way out there, there was no GPS at the time to really track or control; the dumping position was just whatever was entered in the logbook. I got used to diving in dirty water pretty easily. It wasn't that big a deal. Pat's deal which, as I say, is what inspired me – inspired me that, "Hey, we could do this. We could find a way to do this and 'out' these people." Pat's efforts got on television, and ours just got handed over to enforcement authorities at the state level. The idea of an environmental wrong was to me as [severe] as a bodily wrong because that ocean is a bodily

extension of us. We thrive in it. We live because of it. If you insult the ocean, you're insulting us personally. But yeah, I'd more widely celebrate Pat's activity, but that was a piece of it. That was fun.

MG: He sounds like a really interesting person. I was curious if your professional paths crossed because I saw that he later testified to the Committee on Merchant Marine and Fisheries on the Florida Marine Sanctuary Act. What was his expertise?

CM: Pat was a microbiologist. He has developed several patents on microbial techniques. He's long since retired, but he retired to the Florida Keys from New Jersey and had just a marvelous home. Actually, the home was designed by one of the architects of the Panama Canal. The property that he was on was right on one of the inlets, and he could dock his boat right under the house, which to me was just – my God, you've died and gone to heaven here. So professionally, his advice to the sanctuary was – I think it's coming out to be reality today – his point was that the sewage disposal in the Keys is dependent upon the limestone crypts and the presumption that the limestone will filter out the sewage. But his belief and his professional training as a microbiologist was that these nutrients are going to survive through and permeate and leach. It seems that that's one of the stressors that's hitting the Keys now. So Pat was right from the very beginning. There was one other time when we were going down the keys with a ship that I was on; I was the executive officer. The captain, Frank Arbusto, was the commanding officer. I told Frank, I said, “Hey, we're a Woods Hole ship, and we're basically working on Georges Bank all the time. Now we have to go down and do this work in and around the Keys. I got a local guy down there who knows the waters really well. How about a ride-along?” That was a gutsy maneuver on my part because the only reason we'd pick Pat is because I knew him. It wasn't because Pat was just a friend; I knew that he knew those waters well because he was diving on the Spanish galleons, the residual of the Spanish galleons down there, and the like. So we had Pat ride with us down from Miami. He met us in Miami, and then we just – he gave us a tour of the Keys, basically, as we were going down there. Now with our ship, we had to stay responsibly offshore and not get too close to the reefs, but we could navigate surely, and we were able to do that. He gave us a really good tour of familiarization for the work that we later had to do in the vicinity. But his microbial work was – I'll just characterize it as really imaginative stuff. You triggered something else in my mind. His testimony was largely on the environmental health of the Florida Keys. But Pat also was involved, as I said, with the shipwreck salvors, the people who were from Mel Fisher's organization. Mel was the guy who found the *Atocha* down off of the Florida Keys. So Pat, being a shipwreck hunter, cared about the environment, but he also wanted to make sure that people still had the right and the opportunity to recover the materials in a responsible way from shipwrecks. So, fast forward into – gosh, the years are going to elude me, but I was the deputy director of the National Marine Sanctuary System. The Sanctuary System was asserting the regulatory responsibility to protect the Florida Keys. We had people in NOAA who were pretty aggressive about preservation. We also had, what I would characterize in my role, the moderation side. Is there a way that we could protect the environment, but still enjoy the recovery and delivery to the public of these unique artifacts, in some cases, precious artifacts that are underwater, and try and find some middle ground? So there was a hearing to be held because some people in our NOAA headquarters, which is where I worked, had been offering opinions that maybe Spain, who owned the gold that was on these ships, might want to come back and claim ownership of all the gold and send you

salvor guys all packing. That was an unnecessary comment that was [made] in public by a couple of NOAA people. And I disagreed with that. First of all, I recognized that that would not happen in law, that law was sound, and the rights of these folks persisted. The only question was in a regulatory concept, how could we do this so that we protect the environment, and you could do your excavation in a sound way? So I was headed down to Florida. Originally, the people who made those comments were going to go down to a public hearing. I asserted myself and said, "Whoa, timeout. That is not going to happen because all you're going to do is just erupt this thing, and you're on the wrong track anyway. I'm going to go down, and I'm going to talk to these people." At that point, I was trying to ride on the notion that, "Hey, I used to be a shipwreck diver myself. I understand what you guys are about. It's your business. You feed your family doing this stuff." Pat and I talked. I said, "Hey, I'm coming down. Can we have dinner?" He said, "Better than that, why don't I schedule a dinner with all the salvors who want to eat you for lunch? So maybe we have dinner beforehand, we all get to know each other when the public meeting comes in." Right? So we met. We just had a couple of drinks, but it was very distant and not very engaging. Next day, National Geographic television is there. Miami television is there. Locally, it was an event. What is NOAA going to do to these treasure salvors? I opened up by just explaining to people that there's no way in law that your salvage award is going to be extinguished by an environmental regulation. It just can't happen in law. A judge has proclaimed your salvor in possession rights, pounded the gavel. That's done. Environmental regulations that pop up in the agency's domain and under the Administrative Procedures Act just talks about *how* you are going to do what the judge told you in law you can do. So if we're done with that, let's move on to talk about how the regulations might be co-developed with you so we can figure out a rational way of protecting the environment that I know you want to protect as well, even though the public might think that you just want to rip it apart, and then, tally-ho, just go to town. Then we went to a dinner after that, which started – my recollection is – mid-afternoon, which didn't end until about 12:30 am. We were all just family because they saw that I was rational, that Pat had paved the way to let those guys know that I was a decent guy – "trust him." Those were his words. "He's a decent guy. Trust him." I will always be indebted to Pat for that experience. He today has two marvelous daughters who have blossomed in their own careers. At one time, I was their godfather. And, of course, with my sailing days, that put some commuting distance between us. But Molly, yesterday, I'm driving back from Eastern Shore, where I took my boat out for an eight-hour boat ride, just constantly underway for eight hours, just really rejuvenated me. I remembered being on that same route years ago on the beltway, the Washington beltway, and seeing a van with the Florida Keys bumper sticker on it – the Florida Keys school that I knew Corinne and Leah Yananton, Pat's daughters, had gone to school. So I thought, "Huh." I raced up, and I look alongside. There's Pat, his then-wife, Susan, and the kids. I'm waving to them. They're looking at me like, "Who's this nut?" Then they realized it was me. We all pulled over and had a reunion. They were on their way to New Jersey to visit family, driving up from Florida. I had no idea they were making that transit. But yes, the world is amazing. The world is amazing.

MG: It sounds like the diving world is a small one and that there's good connections and engagement with one another.

CM: There is indeed. I'll show you some of the (straight?) connections. Pat helping me with the tough, gritty, brass knuckle kind of treasure salvage community – their reputation, right? I have

plenty of friends who are part of that community. Another fellow, Ian Koblick. Actually, it's I-A-N, as in my dad's name, Ian, but he pronounces it "Yan." Ian was part of the [Mel] Fisher crew very early on, and he enjoyed some of the return from the initial discovery of the Atocha. One of the sweetest guys and precautionary environmentalists that I know. Another fun one was – I'm going to fast forward on you here with the diving community. There was a lawyer who was representing the *Titanic* business firm that was salvaging artifacts from the *Titanic*. Responsive to our work in law for NOAA, we were to fashion a treaty along with the State Department to protect the *Titanic*. That was one of the reasons why I got to dive the *Titanic*. That's a whole other story, maybe for a little bit later. I got a heads up. We had produced these advisory guidelines that were – well, they were only advisory – here's the best conduct you might employ. I was the hearing officer. We got sued by the *Titanic* salvors, RMS Titanic, Royal Mail Ship Titanic, Incorporated was the name of the firm, and their attorney sued us, and the suit was ongoing while we were having the hearing. So I called them out into the hallway, and I said, "Hey, can we have a word?" At that time, I'd been to law school, so I understood law pretty well. "If I were in your shoes, I'd be doing the exact same thing you're doing. I have no animus towards you. I understand you're trying to protect your client's interests. We're just trying to do the right thing and what the Congress told us to get done. We can't ignore the Congress. But I'm also not going to ignore you. I get you. I hear you. But I've got to go back in there and do what I have to do. You've got to go back in there and do what you have to do." Fast forward. This guy and I roomed together on a number of dive trips. We went to different places around the world. He became a friend. I think that's the height of professionalism, which we often lack today. If we think differently, or we're representing an interest that is different, I, therefore, have to hate you, and that's just so wrong. So David Concannon – that's this chap's name. David and I were good buddies. We're acquainted, and we're good buds. I'm a member of the Explorers Club, and I received an invitation to go to the Philadelphia Chapter of the Explorers Club because the gang there wants to hear about these *Titanic* guidelines. I don't know if you ever ran into it, but a chap named John Chatterton, who used to come to the dive shop that I worked in, and a guy named Richie Kohler – Chatterton and Kohler had a [History Channel] TV show diving shipwrecks [*Deep Sea Detectives*] a while back. They were part of the Philly chapter. So David calls me up and says, "Hey, dude, you're being set up. I just want to give you a heads up. People aren't there to listen to your wonders about the *Titanic* guidelines. They're there to chew you apart about how wrong these guidelines are and [how] you're stifling exploration. You're killing the field." "Oh, okay. Thanks, Dave. I got it." So I did a little homework, and I readjusted my slides. I get up there, and I open up after a nice kind introduction from John Chatterton. I'm trying to remember; I think I was the deputy director of the Marine Sanctuary System at the time. My first slide is titled, "Welcome. Thank you for inviting me." My second slide is, "Hey, look, we're all Explorers Club members, right?" "Yeah, yeah." "Okay. Well, slide number three. Here is the code of ethics of the Explorers Club. Do no harm. If you disrupt, make sure that you have the ability to preserve, protect, educate the public." Right? All those things. I laid those principles up. Then the fourth slide was those same principles laid up next to the *Titanic* guidelines. They were identical. I said, "Now that we have the guidelines disposed of," and I looked over at David and I winked at him, "Any questions?" And the room fell silent. [laughter] So that network, no matter what side you're on of that network, the ability to have that back-channel conversation is something that has really enriched me. That ranges from guys like David, who is an accomplished attorney, to guys I know who were in the trades, working really hard Monday through Friday, and spending a lot of money in order to do just

amazing things underwater and discover new things about ships underwater. Everyone got along. It didn't matter what you did Monday through Friday; underwater, we're all doing the same thing together.

MG: Speaking of the Florida Keys and diving, I interviewed Dick Rutkowski a couple of years ago.

CM: Yeah, great guy. Great guy.

MG: I'm just curious if you encountered him throughout your career or have any stories about Dick.

CM: Dick is a legend and a character. He was a marvelous instructor. I learned decompression chamber operation from Dick. He was always at that elite edge of the NOAA Diving program. Dick, Cliff Newell, and Morgan Wells – those three guys. Morgan is, I think, singularly responsible for bringing nitrox-enriched air into the recreational diving world. Morgan was a diver in Sealab. Cliff was blood and guts New England. I think he was a Maine-iac. I think he's from up north, where you are now. His New England accent always preceded him. Those three guys were the blood and guts of the NOAA Diving Program. And then we, as the officers, would just rotate through. But Dick's instruction down in the Florida Keys, the company that he established was – still is, I think, one of the leading places you can go to in the country to learn, to learn decompression chamber operation, unless you come up through the Navy, right? But to have entry as a civilian to come in there – there was another chap that worked for Dick named Marc Kaiser. And Marc was a NOAA employee for a bunch of years, a model-handsome guy. In fact, I think he was recruited to be an extra in *Miami Vice* once or twice. Marc was just a really, really sharp guy and good with everything that Dick had taught him. Marc went to work at one of the hospitals in Miami treating people in hyperbaric chambers, so he went on to a very successful career there as well. But Dick taught us during the course of some drills we had down in Florida. When Dick was based in the Miami lab, and the NOAA Diving Center was down there doing some experimental dives for NOAA in a scientific way. We had a drill down there that he helped to run. There was another guy named Dudley Crosson, and Dudley was a paramedic, and on contract, he came to help teach with NOAA. So Dick and Dudley were handling the course. We had to conduct what you'd call a live drill of diving accidents and then also physical accidents like a ship sinking. I remember one time Dick was the referee, and we had one last victim who was deep in the engine room and had to go through a vertical scuttle on a backboard to get them up and out. The whole idea was you save as many people as you can, but you have to save yourself because we don't want more statistics, right? So we had this one person down below we had back-boarded, buckled up, ready to go, ready on the lift, and Dick is calling out the numbers on the watch. It's coming down, "Fifteen, fourteen, thirteen." "We got to get out of here." We just looked at the guy down there and said, "Sorry, we'll see you for a beer later." We get up the scuttle and out, right as the ship was supposed to have sunk. Rutkowski came over, and he said, "You did the right thing because there would have been four of you dead instead of one." Sometimes that's the tough call you've got to make. He brought real-life training to us. He taught us soundly nitrox diving, along with Morgan, and chamber operation. He always had that gleam in his eye, and there was a story right behind everything

that he could offer to you. Everyone loves Dick. Everyone loves Dick. He had a huge influence on generations of NOAA divers.

MG: Yes, he was very fun to interview. Speaking of diving accidents, I think you alluded to witnessing some or knowing some divers, whom you grew up with, who experienced accidents or close calls. What were you referring to? What did you see happen?

CM: We had an occasion out on the boat, where a diver was down and missing and hadn't returned. Based on the clock, either the guy surfaced, he's floating, and no one saw him, or he's still down there. So folks went by. We went and jumped in, looked around, and tried to find the guy but couldn't. There were embolisms, where early on, I don't think most divers knew or understood the distinction between the bends versus an embolism. Both are very serious but depending on the type of embolism, one is even more urgent. In one incident we were diving on a shipwreck called the *Northern Pacific*, which was an ocean liner that sank off of South Jersey and in the offshore approaches to Delaware Bay. As we came up, and I was with my three other mates I was talking about – John, Jack, and Ray. We had a four-man dive team, which was really two and two. But in Jersey language, you go do your own thing, and you look for the other guy occasionally. Then you look for the other two occasionally and try and go back up the anchor line together. So we all came up the line together. We're doing our decompression, hanging on the line decompressing. As we came up, this other chap was climbing up the ladder. It was a larger boat. It was a head boat, basically, a fishing boat that was taking divers out as well. One of my friends said he didn't look right on the ladder. I didn't see him at that point in time. I didn't see him until he actually sat down to take his tanks off. When they sat him down, my attention was drawn to the fact that he doesn't appear right or alert. “Hey, something's wrong with Dave.” So as I'm stripping off my gear I look over, he just basically keeled over and lost his consciousness as he was trying to take his tanks off. He was not physically mobile enough to do that. So down he goes. There was another chap on board. It was a pretty big group. Another chap on board who was a great diver, just a wonderful guy. His name was Bart Malone. Bart had the bends previously in that that dive season, so he had to lose a couple of weeks before he could go back diving. Bart had experienced the bends. I recognized that – and several others did – as more likely an embolism rather than the bends, increasing the urgency. What happened was a debacle of monumental proportions. The captain, who was a fishing captain doing his best to try and help all the personnel on board that he's responsible for, talked to the Coast Guard on VHF radio. The Coast Guard was going to come out and get David, and they responded immediately with a helicopter. So we get him wrapped up when the mesh basket comes down and get him shipped off. We then come to learn – the captain says, “Your friend is okay, but he's at the local hospital.” We're starting to get enraged here because you don't treat a diving accident at the local hospital with no decompression chamber. He was a middle-aged guy at the time. The doctors who received him at this local hospital didn't understand diving medicine. Few did then. To them at his age it looked like a heart attack or a stroke.” Well, it's a stroke, but it's not caused by a conventional blood clot. It's caused by an aerial embolism. This is a different thing. You need to recompress him. Don't give him the drugs for dissolving clots, which I didn't even know back in those days whether you had clot-dissolving drugs. So they're treating him for the wrong thing. Bart gets it on the radio with the courtesy of the captain – we went and implored to the captain, “Hey, this is bad news. Tell the docs you're not saving our friend; you're killing him.” Make a long story short – we drove to the hospital once the boat got in. I drove David's

car to the hospital in Philly, and effectively, the guys – Bart among them – commandeered an ambulance and said, “If you don't take this guy to Philly, you're going to kill him, and you're responsible for his murder.” Well, that was a little bit of hyperbole, but it got people's attention. So David, way late, hours late, got to Philadelphia. We, as an entourage, went up there, and he was then recognized by well-trained diving physicians who were in Philadelphia – I believe it was St. Barnabas, but I may have the name wrong – and treated David. He made a significant recovery, but I don't know whether he completely recovered. I just don't know. The follow-on details are fuzzy for me but I didn't see him again on the dive boats. Then there were times when, early on out on the boats – this is while I'm still growing into the body that I got as an adult. I was not a big guy, but I was kind of thin, and if a diver came up far away from the boat, “Hey, where's the kid? Get the kid.” Kid? They didn't know how old I was. I was just young. I would lash a harness on with a line, and I'd go swim and bring people back. One of them I brought back was Bart, and he's a local legend; he was widely respected in the dive community. There's a guy up on the surface just floating, undulating with the waves, and he's not moving. You recognize a guy by his gear, so I didn't know dead, alive, or what? So I get lashed up. I'm the guy. I think I also had a little bit of volunteerism in me, too, that I would step forward and say, “Hey, I'll go.” So I get in the water, and I'm swimming out to him. Best recollection – I get as far as the spare anchor line will take me, and that's not far enough. So they say, “Wait a minute,” and they find more line and attach it and all because the crew on the boat are're going to pull me and another guy back. I can't swim him back with all his gear. So I get to him, and he's still motionless. He's just in the water moving, undulating with each wave. I'd seen other divers in situations like that, and they were dead. So I got up to him, and I just hit his leg because that was the first piece that was near me. His head turns around. He looks at me. I was like, “Oh my god, at least he's alive.” He pops his head up, and he smiles. He says, “Yeah, I got some leg cramps. I just can't swim. I'm cramping up. I figured you guys would come and get me. Thank you.” Puts his snorkel back in his mouth. I latch the two of us up, give the signal, and they pulled us both back in. I was so relieved that all he had was leg cramps, but some of the other times not. A dear friend of mine, a guy named Neil Gomes lost his life on a simple dive job, after I left and joined NOAA. Losing him hurt. Fast forward to when we're doing some commercial jobs. We would inspect bridges. We would look into dirty water for the structural integrity of bridges. This was all in the wake of – I forget the year. Doing the math to try and figure out when all this happened. It was in the '70s; there was a highway bridge on Route 95 that collapsed in the Connecticut River, I believe it was, and that created the need to survey the superstructure and the underpinning structure of bridges. There was an aerial crew, and there was a dive crew, and I got involved with companies that were doing the dive crew side. That's where my commercial diving came from. We were often doing these inspections in zero visibility water. Today, we could do that with electronics – sonar, ground penetrating radar, all those technologies – with sound, we can penetrate. Back then, the only sound was carry a hammer if you're on concrete and carry an icepick if you're on wood. The inspections would be – if the ice pick can penetrate, then you do a core sample and see whether teredo worms are inhabiting, and then you have to replace the pilings. On the concrete, you just bang with a hammer. If it's a dull thud, you know you got bad concrete; something's eroding behind the surface. If it's a good rebound, we're okay. You can do that blind. That's what we were doing. We had a job – I'm trying to remember the one. I did one for a water company, where I had to swim through the interior of a pipeline, and the water company wanted to install a sample line to the head of the pipeline, and it went under a road into a pump house, and then into the pump. If

the pump was turned on, I'd be killed. I swam that pipeline, and with me were several of these other guys. I come up to the pumphous, and I can't get out. I swim through the pipeline, go left, go right, make another right, and then come up – something like that. So I do that. I wrote it on my glove, the directions, on a piece of tape. So I got the light; I'm shining it. Okay. I did the right, did the left, and I can't come up. So now I've got to come all the way back out. I pull on the tending line, and there's so much line out; the guys there on the other end at the surface can't feel it. I don't get a response back, and I'm realizing there's a lot of line out. It's about three hundred feet of line or more – a football field. So I'm coiling the line up as I go, trying not to get tangled in it. This pipeline is only about three and a half feet wide. So I couldn't turn around in it. I could only turn around at the pump house, which I now can't get out of because there's a cage there barring me. So I swim, grab the line, come all the way out, come back up to the surface. I said, "Guys, we got a problem. Your diagram is screwed up. I can't get out of there." They said, "Yeah, well, we heard you in there. You were tapping and all that stuff, but we didn't see you come up." "Yeah, I couldn't." Then this fellow comes along who was the maintenance guy. He was an immigrant of what nation I couldn't begin to remember. But with his accent, he said, "No, no, the plans are wrong. I crawled through there two years ago when we went dry. The plans as built are different than the way it looks now. Instead of going left and right and a left, you need to go right, right, and up," or whatever. I looked at the guy, and I said, "I trust you." [laughter] I looked back at the engineers and said, "You guys obviously don't have it together. All right. I'll do one more swim here, and then we're done." This is a funny one, so we'll leave this one off. Edit this one out. You can record it.

MG: Are you sure?

CM: Yes, you can record it. I had this other friend who was Nick Colatrella, Nicholas (Colatrella?). If you've ever met Joe Pesci, you met Nick. They both grew up in Belleville, New Jersey, near Newark – the accent, the choice of language, everything. Nick was a fireplug and as loyal and dedicated as the day is long. There had been another similar job that another guy had done with another company. He was in a pump house, and they turned the pump on while he was inside. So the whole idea of tagging out a system has value. Just many, many breakdowns there which cost a diver his life. I wanted to make sure that I got out of that pipe. I asked Nick, who was an excellent diver in his own right – I said, "Nick, your most important job is I'm going to sit you at the control station and do anything you need to to make sure that nobody turns that pump on." As I was getting ready for the dive, I took a trash can, and I sat it down in between his legs under the control console where he was sitting. I said, "Nick, you don't even get up to pee." Forgive my language. "You don't even get up to pee. You're sitting here until I put my hand on your shoulder and I'm back." He said, "Okay, I got it." Nick was about fifteen years older than me. He's part of that whole generational cadre that seems to be where I found my friends in life. Out I go, do the first swim – not there. Do the second swim. I came up from the dive into the pubhouse and then into the control room to see Nick; he was still sitting there loyally, ready to kill. He would have killed anybody that tried to touch that switch. He was a third-degree black belt. I do the swim, I come up, and it worked, and everything's good, and there's all this back-slapping and all that stuff going on, and I realize Nick is still sitting at that console; he is not moving. I came up to him, and *then* I put my hand on his shoulder. I said, "Thank you, Nick. We're good." *Then* he got up. I must have been in there for ten minutes. We're all talking about how it went and all this sort of stuff. He was going to go right to the

edge. Those are the guys you meet in diving, who you do trust your life with, you absolutely do trust your life with.

MG: That's incredible. Are there any other diving stories from your youth that you want to share before we get into your college years?

CM: One fun one was – there wasn't a whole lot of diving diversity. But I remember on some of the bigger boats – not my boat with Pat, but on some of the bigger boats, you'd get a real collection, a real gaggle of people in there. One of the few women who was diving at that early time was as talented, capable, and as tough as any of the guys, including joining some of the guys who would just basically strip down and put the wetsuit on over their naked body. There this lady was doing the same sort of thing. I was a little more modest; I was a speedo guy, right? You'd put the speedo on underneath the wetsuit. But nonetheless, there we go. But the other one was, there weren't very many African American divers, and I met several in my NOAA days who were very involved since the '60s in diving. Dr. Jose Jones was one of them, a fabulous guy who really recruited African American interest in diving, and he was based in DC. On one of the earlier dives, we had this two-man buddy team who I just knew to say hi to them because we'd be occasionally on the same boats, but I didn't know the fellows well. But one kid who was very proud of his Polish heritage replaced the emblem of the suit that he would wear – they were called unisuits; they were dry suits. I'm sure Rutkowski might have mentioned some of that to you. But instead of the Poseidon logo, he had the Polish flag on it. He called himself a derisive term of Polish heritage. His buddy was an African American diver. The two of them were a buddy team. I'm coming up the line to get to my decompression stop. I see the two guys; they kind of give a wave because, like I say, you know the guys' equipment, you know who's who, and they're holding a lobster, one by one claw; the other has another claw, and the tail tucked in his arm, and the lobster's fighting them, and they're trying to wrestle this huge lobster and get it to the surface. Many divers would go looking for lobster. I was always looking for brass and maritime souvenirs and subjects, but a lot of guys would go for lobster. I had a mesh bag and a tool bag. I pulled out my mesh bag, and we're trying to wrestle that lobster into the mesh bag. It's turning out to be a total circus, and they wanted to bring that lobster home. Finally, I gave them a look. They gave me a look like, "This ain't working." The two of them just footballed up this lobster, and it was just so funny to watch them doing that. I got such a kick out of that. We all laughed on the surface.

MG: I'm wondering what characteristics you have to have to get into diving. I've always been very intimidated by it. Maybe I'm not brave enough.

MC: It's not brave. It's comfort, Molly. My wife, who loves the ocean and has joined me on a number of these diving excursions with the Sea Space Symposium and such, went to take diving lessons. She actually did a resort course in diving. How she did it, I don't know, but it was lousy conditions, storm, everything, visibility terrible. She got down sixty feet, did the exercise with the instructor, and came back up. Then I said, "Well, what you probably want to do is take a longer-term course, take a regular course. You get trained more deeply in this stuff." She did but she was uncomfortable with the equipment on. And here, it wasn't in the bad visibility of an open ocean environment. It was in the pool setting. She felt claustrophobic. She was all upset because she couldn't complete that particular drill. I asked her, "Why do you want to go

diving?” Her answer was, “Well, so I could be with you.” I said, “We're going to be together forever. Don't worry about that. Come on the trips and enjoy the environment and the place and the people, but don't worry about the diving. Unless you have a desire, a passion to want to get in the water and get under the water, which is not always easy, which is not always comfortable, which is not always fun, until you get to the point where you have the reward of what you're looking for in that dive, don't do it. Don't do it for me. You've got to feel it. You've got to want to do it yourself.” That was the peaceful way that we resolved that. This reminds me of Jack Kelleher, my other friend – we were in Scapa Flow in Scotland, the north of Scotland in the Orkney Islands. Scapa Flow is the British Pearl Harbor. There was an amazing aircraft carrier that was blown up there by a German U-boat in World War II, the *Royal Oak*. There was also the World War I German fleet that was interned in Scapa Flow and was scuttled; the Germans scuttled it so the British wouldn't get the ships to be able to use the ships in the future. There's either a second or third trip to Scapa. I can't remember. On our trip back – we had been there before – Jack went down, about two-thirds of the way down to the bottom, and stopped. I looked at him, flashed him the okay sign. He was okay. I went on. Did my dive. I'm coming back up. Ray was with me at that time, too. We see Jack, and we still give him the okay; he's okay. Right? In the back of my mind, I'm thinking of my friend David, who had the embolism, where he didn't appear right and all. But Jack, I could see in his eyes that he was there. He was all there. You could see in David's eyes at the time what was happening. We come on back up. We strip our gear off on top of the boat, and [say], “Jack, are you okay?” He said, “I'm fine. I'm fine. But I got to tell you, I just don't have it anymore. It's just not there for me anymore. I'm happy to be here with you guys. I'm loving the environment and all that. I'm happy to help out on deck, but it's just not there for me anymore.” So my buddy Ray starts razzing Jack. He was using words that probably come more frequently from our former President, but nonetheless, “You bum. You this. You that.” I got Ray aside, and I said, “He's got more chops than you do. You're jazzing him because he's recognized something really important. It took a lot of courage for him to basically say, ‘It's not there for me anymore, so I'm just going to chill. I'll just stay up here and help run topside.’” That was a maturity of decision that Jack had made. That guy was always there buried underneath a magnificent dry sense of humor, but *boom*, there the character of the man was, and he had the courage to do that and say that. That was a lesson for me to carry on through life. I was an ensign at that time. That was early in my NOAA career. I took leave, and we went over to Scotland to go diving up there. That was a really cool thing, seeing battleships underwater. I got to tell you this one just because it's fun. One of the battleships was completely inverted. The fellow who ran the diving operation there, who was an Englishman who made his way on up to Orkney – married, children, lovely guy – John Thornton. John said, “We never knew whether or not the superstructure of the ship while inverted is inundated or not.” Inundated meaning that the sediment has gotten into it. John comes up with a house jack; we jack open a watertight door, we chain it open, we go inside, and we go down a couple of deck levels. Sure enough, there wasn't any sediment in there; it was all sealed in there. But now the ship was about ten degrees off of inverted. So up is not quite up; up is actually down, and it's kind of squirrely. We were pretty deep, to begin with, about a hundred and sixty feet, something like that. We're inside this thing. We prove the point that it's not inundated. There were three of us inside there, and I decided, “Yeah, okay, I think we're done. We can turn around and get out of here. Because the deeper we go, what are we going to prove? We got it.” But the whole combination of the house jack, chaining it open, doing this, I think we spent four dives getting

that lined up in order to make the penetration to go inside and look around in there – going down the ladder well and seeing all the different deck levels.

MG: You mentioned these international dive experiences. I just was curious how it's determined who has jurisdiction over certain explorations. Who gets to decide who can explore it?

CM: In the New Jersey environment, it was just you've got a boat, you got a bunch of guys, you can go on out there and go ahead and make a dive. If there's another boat out there, you provide the courtesy to the boat, let them finish their dives first before you get on, or maybe on the way out, the boat operators would have talked to each other and said, "No, we're going to be here rather than there." During the course of my NOAA career, when I was going to law school, I bought a used lobster boat, and I converted it pretty easily by just bolting a ladder on the back deck, a thirty-eight foot wooden-hulled Downeast design, so you would recognize it easily. I dove up there with my friends – didn't charter it, didn't do it for money or anything. We were just diving on the wrecks in and around Block Island and the whole Rhode Island scene. There was a German U-boat there. It was sunk the second to last day of World War II. The ship it sunk was maybe five miles away as well. There were two other submarines in the area that the Navy had sunk as munitions tests; one was a pre-World War I vintage submarine, the L-8, it's called, Lima-hyphen-eight, and the other one was the *Bass*, the USS *Bass*, which was a pre-World War II sub. So there was plenty of diving up there, plus steamships. We'd get on the radio and talk to each other as the charter operators, who I had spent time with and knew all those guys. You kind of knew where everybody was going, so you'd stay out of each other's way. We got lazy and elite. We decided that number one, we're going to put a buoy on the U-boat so that you don't have to continue to hook into it all the time; you can just tie up to the buoy. The other thing was, we were – I'm trying to remember my age at the time. The dive tables are made up by a bunch of eighteen to twenty-two-year-olds Navy male divers, so the female physiology is not fully included in that computation, nor is the advanced age. You're just supposed to take more and more conservatism. We looked at each other and said, "You know what would be more smart? Instead of getting out at the crack of dawn, we go for a leisurely breakfast, let the charter boats hit the site" – because it was a very popular site – "and then, after breakfast, we go out, and we just do one long dive for the day. Then we'll fish on our way in, and if we catch a blue fish, there's dinner." That's basically what we did. But you worked it out among everybody. There was a little bit of jocular – what shall I say? – competition, who could find the best artifact or do this and that. At the time, this was a time preceding the Sunken State Craft Act, which went into law and made clear that the ownership of the military vessels sunk is retained by the country of origin unless in surrender. For example, the Japanese surrender versus the German surrender is a little different, and the ownership is different. So Japan still owns those ships. But on the German side, we respect Germany's sovereignty, and I got involved in that and the legalities with the U-701 years later when recreational divers were diving on it. Anyway, we would penetrate inside of the submarine to look around and just compare things. At one point in time, one of the dive operators said, "Hey, I'm in the galley area, and I'm looking for dishes." So I remembered that. Later we're in Ocean State Job Lot. Okay. So I go into Job Lot, and there's a stack of dishes. We would go in there to buy dive tools because they're going to rust out every year – a come-a-long or whatever else you need – wrenches. But I see these dishes, and I thought, "Okay, Billy's working in the galley." So I buy half a dozen of these

dishes. I took the dishes. Looked at them. They say, “Made in East Germany,” right? East Germany? World War II? No. Okay. I swim these down, and I put them in the mud in the galley. I fan a little bit of silt over them. Then I cautiously back out, and then I’m done. So Billy’s going out with the charter the next day. He goes right to the galley. *Boom*. He’s all excited. He found these dishes. I’m talking to him on the radio as I’m on my way out to the site. I asked him, “Hey, how’d your day go? Did you get back in the galley? Oh, tell me about the dishes. Wow. Billy, flip them over. What does it say?” He says, “Hey, it’s right here. East Germany.” He cursed me out over the radio because he knew that I had done that to him.
[laughter]

MG: [laughter] I love that. I wanted to ask about the risks involved in diving. Did you have certain rituals you did before you dive? Was there a certain practice or habit you had?

CM: There was kind of a macabre sense of humor that everybody had, and it was the nervousness of the anticipation of the dive, kind of like a football locker room where guys are joking around. Other locker rooms are very quiet and sterile. But in the dive community, there’s a lot of jocular razzing around. What became the notion was, before you jumped into the water, I would say to Jack or to Ray or somebody, “Hey, if you don’t come back, I got your doubles, right?” The doubles were the twin tanks. It was, “If I don’t make it, you’ve got my gear” sort of thing, but nobody ever intending that that would really happen, so it was just a joke. But the only ritual was more on the jocular side to handle the nervous energy. Nothing spiritual, not everybody getting down, taking a knee, saying a prayer, nothing like that. The scene was too macho to do anything like that. Later on, when I was doing some of the – what people later called – technical diving, which is kind of an odd term, but basically, it implies using mixed gas instead of conventional air, which itself is a mixed gas, but using helium, nitrogen, oxygen, or helium and oxygen. It would be a little bit more contemplative because the gear was heavier, it was more complex to get organized, you had many more steps to go through, more people involved, reserve and relief divers to help you on the way up – all that sort of stuff. So we got a little bit more serious there. There was a little bit less of the jocularity. But the routine was [a] slap on the back sort of thing out on the dive boats. The NOAA dives [were] much more serious, much more organized. I forgot this one, but this was not my Jersey time. This was an event that we had during a NOAA dive, where one of the divers had to perform an emergency ascent because he was out of air. Just getting yourself in that position is already a bold error. He separated from his buddy and became entangled in a search line. It was a mess. But we handled that very well.

MG: Was he ultimately okay?

CM: He was fine. When he came back, I told him, “I want you to take some time off and get some evaluation with the NOAA Diving Program. Because what you did down there – you put yourself and your buddy at risk.” Cliff and I had a disagreement over that. That disagreement prevailed until I was transferred to my next assignment. Then Cliff put the guy back in diving status. But I thought, “He’s a risk right now, and I can’t tolerate that risk. So you’re not diving. You’re going to stand down.”

MG: I didn't realize it took so long to recover from the bends. What happens to you physiologically? What's the recovery like?

CM: Well, the recovery is [to] be a normal person, stay away from diving. If you have an embolism, you need to pressurize that bubble of air so that it's so small that it then, under pressure, gets assimilated by the body, works its way to the lungs, and then gets breathed out. In the bends, the nitrogen bubbles – if we're looking at air, the nitrogen bubble's still a bubble, but it's not the same kind of clot that would block cerebral or pulmonary circulation. The bends could be in the arm, could be in the legs, could be anywhere pressing against a nerve; it just is denying circulation for that tissue that's pervaded by oxygenated blood. Once you compress it and you recover, you may have tissue damage at the downstream end of where it was, and you want to take some time to determine whether there are long-term effects rather than “Yup, you're good. Now jump back in the water.” Is it a legacy from your initial injury? Is it a new injury? Is it a new symptom that we have to treat you again? Is that a legacy symptom? So the docs usually want you to take some time off from diving. I was at a different position. I was saying, “You don't have it up here to be getting into the water because you put your buddy at risk by doing the hero's job instead of the job we planned.” But for the medical recovery on the bends, you want to make sure that the person is fully recovered, there's no neurological deficit, and you want to make sure that you've got knowledge of what that deficit is. So, don't go back diving right away. If the body is going to recover from denied perfusion, let it recover. Don't go challenging. Where we get confused is whether you have another, as we call it, a hit of the bends or not.

MG: Before we leave high school and talk about your time at Rutgers, I want to make sure we don't forget to talk about the Eagles. You mentioned them in your survey. The Eagles formed, I think, in 1971. Were you a fan right away?

CM: Immediately. My brother and I were awakened to do a whole stream of music with The Beatles. We ranged hither and yon with the family music, etc. But it then came time where the Woodstock stuff was pretty darn cool. I liked the tone of Woodstock. Louis Uccellini, if you ever get to interview him, went to Woodstock, and that's one of the more fantastic conversations I've had with somebody who's been there, our former Weather Service Director and a good friend. I was listening to Poco first, and Poco was kind of that country rock and roll sort of stuff, beautiful harmonies. An interesting comparison is that the high voice in there, Timothy Schmit, the bass player, left Poco to go to the Eagles when the Eagles' high voice departed, Randy Meisner. He wanted more bluegrass than the Eagles were ready to play. I probably went to a dozen Eagles concerts between the Capitol Theater in Passaic. Oh, well. They would play in Passaic, right next-door to my hometown. They played in Jersey City. I'm trying to think of what other venues I saw them in, but pretty much it was the stadium in Jersey City and the theater in Passaic. I really enjoyed their music.

MG: You sort of paraphrased a comment they had made in an interview about how you spend your life getting over what happened to you in high school, and I didn't know how that related to your experience of your high school years.

CM: Yeah, I don't think there was anything negative that happened to me in high school that I had to get over. That was Don Henley, who's a much more successful musician than I will ever be. Henley's voice is amazing. My point in raising that was I had a wonderful experience in high school. I was the class comedian. I had friends in all camps. I was on the football team, but yet I was playing rock and roll bands. I had the boatyard, and I had the river. I had diving; most guys didn't. I think the only other classmate of mine that had anything that was out of the ordinary was a chap who was a hang-glider, and he would go out hang-gliding and had some really neat stories. We'd, once in a while, get together. We weren't tight buds, but we'd get together and just – “Hey. So, what was your latest adventure?” High School was great for me. I spent no time getting over what happened in high school. We let Henley work on that. But it was a good way for me to bring the Eagles into it.

MG: Did you have chances to see them perform over the years?

CM: I did. I think I saw Glenn Frey in the last tour prior to his demise, which – God, he was, I think, sixty-two when he passed. I'm older than Frey. The poor guy. He just had so much to offer as a musician. I don't know much about these guys personally, but just as musicians, they were fantastic. It was in Baltimore. I took my good buddy, Ole Varmer, who was a shipwreck lawyer, and we worked together on a number of things. He'll come up in our NOAA chapter, I'm sure. Ole and I went. Ole was the front man for our blues band. So we were musicians going to see music, and we saw them in Baltimore at the Royal Farms Arena. It's a modest-sized forum, nothing absolutely huge in Baltimore. But that was it. It was a very, very fine show. They did a beautiful job of playing the music from the very beginning. They had all their band members in there except for one guy, which Frey had always been on the outs with for a long time and one of the reasons why they split, Don Felder, who's an excellent guitarist, but they didn't bring Felder back. It's interesting to watch people you admire hate each other for reasons that probably aren't worth continuing the hatred over because they made beautiful music together, but personality-wise, they couldn't get along. That was something I didn't know at the time, but later on, I looked at, and I realized for all the people I might have had a bad run-in with, I am not capable of holding this interminable grudge. I've had people that I've had bold disagreements with, and we've gotten past it. I think that's a much higher value in life. Certainly, if you want to work in government, you've got to get around to that. You have to just let things go. By watching outside life on the dive boats or that observation from the Eagles, you got to go through life collecting experiences, and it may be other people's experiences that inform you [on] how to market and channel your own.

MG: I think if Mick Jagger and Keith Richards can figure it out, anybody can for the sake of music and moving on and all of that.

CM: Are you a Stones fan?

MG: Yes. I like the Rolling Stones.

CM: Yeah, they're amazing. They're amazing. I think they always were in a marginal shadow of the Beatles because of their time, but, my God, they have lasted, and the Beatles couldn't.

MG: I know. So, how were you thinking about your next steps as a senior in high school? Were you considering other colleges? Walk me through that time period.

CM: Both my brother and I were inculcated by our parents to understand that hell or high water, we're going to college – “You are going to college.” My parents took us to visit Princeton University when we were young, and we all came home with books that had the Ivy League schools’ symbols on them, and those were our three-ring binders. So it was always there. My parents never went to college. They wanted to make sure my brother and I did. My brother, a year older than me, had done a rather rigorous review of schools that he might go to. I remember my dad having to seek the counsel of the engineers at his work because, again, my dad not having had a formal education to any great extent, was not experienced in how you do this and didn't have the benefit of that college experience. He got the advice from some of the engineers who were at a higher order of seniority in his work. So my brother went, and he did the thorough thing. He visited campuses. He did all that. I filled out the application, and I figured, “Okay, whatever. I'll land wherever I do.” Rutgers accepted me. Several other schools accepted me, but I thought Rutgers – I had a girlfriend at the time. I didn't want to be too far away from where she was. Forty-five minutes from home? Rutgers? We could do this. So I was already accepted and had accepted the acceptance before we actually drove down there to see what it was all about. When I saw it, I really liked it. I thought, “Hey, this is a nice campus. This is a cool place.” Showing up at Rutgers was new. Everybody's just trying to get established. I had the most conservative Christian, absolutely great guy, as a roommate my first year, and he hailed from Cape May, New Jersey. We had other guys on the floor who were from out of state. Another guy who became a good friend was from Bucks County, Pennsylvania. The mix – a couple of Delawareans and people from all over, but mostly Jersey kids, and a few friends of mine from high school. Interestingly, I didn't do a lot with my high school friends. You very quickly adapt to socializing with the folks you're living with, and things went on in a very positive way. I was on the main campus side my freshman year in one of the river dorms if you remember those. For my sophomore through senior year, I was over on Busch campus. I became a dorm counselor. I applied to become a dorm counselor for my junior year. I just thought it was a cool job, a fun job, and I enjoyed it. We had some interesting things during the course of that, but scholastically, I was still exploring my first year. You're in the big classes. I didn't do well in my first year. I was not focused on it. I was more figuring out, “What's really going on here? I'm in a class with three hundred kids. How does that work?” Well, the sections break you down, and you do much more work in the sections. But I think it was one of those situations where I was told I was going to go, therefore, I went, but I probably wasn't as ready to go. It took me a year to wake up. Sophomore through senior year, I did very well. But that first freshman year, I was still just figuring myself out. I had science courses. I was going to be a chemistry major. I shifted that over to zoology once I really got into biology because of a fantastic section instructor, the guy who was teaching our section, which was only maybe twenty students as opposed to the several hundred that would be in the full course. So then I went on and enjoyed – I wouldn't say I really enjoyed the campus life because I was doing more studying than beer in one hand frisbee and the other out on the quad. I never was a quad guy, but we had fun doing our weekend stuff. It was sophomore year when I really started to settle in on the sciences, figure out my major, [and] really score out what I wanted to take course-wise. The Rutgers course offerings were very solid. Most of my classmates were pre-med, and I was not interested in medical school. I wanted to figure out a route in science and ocean science. I found

some courses. I found a marvelous professor in Carol Litchfield. Dr. Litchfield was teaching a course in marine microbiology. I had to take general microbiology first in order to do that. So I took my first semester of general micro, and marine micro was a spring course. So I was able to take it in the spring with her permission. Normally I couldn't because I didn't do the full year of micro, the first and second semester. I did well enough there that at least I had her recognition as a student that I could do the work. At the same time, I started volunteering at the Coastal Studies Institute, which was a nascent coastal expression in Rutgers back in '77, '78. I worked for a foreign-born professor, who I would describe as – he had to be very talented, but he had the reputation of being remarkably demanding, at times, discourteous, and marginally – to use the word “abuse” brings in way too much, given what we know of abuse today, but he just did not treat students with a whole lot of opportunity and respect. But I volunteered, and because nobody else wanted to work for this guy, I got in like a song. *Boom*, there I am, and I'm working for this fellow. Unlike the Jersey guy that I can be, who pipes up and says what's what, I just kept my mouth shut; I just did what I was asked to do. When Dr. Litchfield asked me if I wanted to join her lab as an undergraduate, she made the comment that she and her postdocs and her colleagues had seen the way I had worked for this guy who was not easy to work for, so that it should be really easy for me to work with them. They were just a wonderful group of people. Through them, I did get the experience to go out on NOAA ships, my junior and senior year, and actually have oceanographic cruises, not really as a student, but with a role of fulfilling the mission, which included looking at dump sites and looking at the marine pollution and antibiotic-resistant bacteria that was adapting to what we were dumping in the ocean.

MG: Did you enter Rutgers in the fall of 1975?

CM: Yes, because I graduated in May '79. So, yes, Fall of '75 and I graduated in the spring of '79.

MG: I have more questions about Rutgers. So we can do one of two things. I can ask you as many questions as we get through the next ten or so minutes or stop right here and dive right into Rutgers the next time. Totally up to you.

CM: Take it where you want it to go, Molly. You know what you're wanting to get out of this, and I'm fine.

MG: Well, maybe I'll ask you some broad questions about the nature of the curriculum, and then we can get into some more details next time. I have this sense that the 1970s was an era for Rutgers of promoting the biological sciences in the curriculum. Did you have a sense of that before you applied or while you were there?

CM: I didn't have all the lights on when I applied to college. I just knew I had to go somewhere; I'll find a place. So it wasn't really because of the course offering in particular. It wasn't like I looked in the catalog and said, “Oh boy, there's the Coastal Studies Institute. I want to go there.” I looked at Rutgers, and I said, “First of all, state school. Very broad in the education.” I started out wanting to be a chemistry major, because of the influence of a high school chemistry teacher that I had. I think I mentioned that fellow to you, Mr. Lazar, great guy. He suggested, “Hey, try chemistry.” So when I got to Rutgers, it was the recognition that there's a great deal of diversity

here that I could follow. I just want a basic science degree, and I'll figure out what I want to do thereafter. So it wasn't like I combed the catalog. I realized that there was a coastal and marine presence. But it wasn't like the University of Miami or some of the other schools that really had a rich marine course catalog. I also understood that if you wanted to get into marine science, it isn't your bachelor's degree that's going to carry you there; you're going to have to go on for advanced degrees. This was one of the gifts that Dr. Litchfield, who was not my formal adviser but informally became my advisor. What she described was "Just get a basic science degree, and then go on into graduate school." So I wasn't combing the catalog to really find the best-tailored curriculum for me because, as it turned out, I went in a slightly different direction – science, but not the same science.

MG: Yes, I want to understand better why you shifted gears to zoology. Was it the influence of this great professor? Were you finding that your skills were better matched to that field?

CM: Probably a mix of both. But in my opinion, at that time, chemistry was not well taught. I had a TA [teacher assistant] with a language barrier, language challenge. As we discussed earlier, I'm all for people coming on into this country and contributing to America. If I can't really understand what the person is saying, I'm going to have a harder time applying myself and learning it. I also had an absolutely fantastic TA, a teaching assistant, in biology. He was in a holding pattern waiting for a medical school acceptance. I guess he didn't get in the first round, but he then went on to do a master's. I'm trying to remember his name, but he was just fantastic. He brought so much excitement and had so much interest. I'm sure he made a wonderful doctor when he did get in. I'm sure he just became a wonderful doctor because his bedside manner, his student-side manner was compelling. Of the biology – first half botany, second half zoology – I really got spun up by the zoology side. I've always been interested in animals. That's what really appealed to me. So then I made some inquiries to look at the zoology curriculum, and I realized it's pretty much the same thing that the pre-meds have. But I'm not competing with these guys for med school. I'm not competing with anybody. I just want to get an education. I fell in with two guys my sophomore year who went on to med school. You seek the friends who are going to carry you to the direction that you want to go in. These two guys, I didn't know how brilliant they were when I met them. I just knew that they were serious about their studies, but they also enjoyed a laugh and could have some fun on weekends. The one fellow graduate, I think he graduated number two in the entire class of Rutgers College with his degree in – he went on to med school. He was a BioSci, Biological Sciences, major. You don't just show up one morning and do that. That's a really concerted effort. These guys helped me stay on a road towards a more focused academic pursuit, and they were pre-med. Hey, I'm a zoology major. I'm not going to med school. Don't want to go to med school. You guys got that. But away we go.

MG: Did you ever take any classes with Dr. Judith Weis?

CM: Oh, God. That name is familiar. I don't believe I had her as a professor, but I remember her name.

MG: She was a marine biologist and taught at Rutgers for fifty years.

CM: Was she at Cook College by chance?

MG: Possibly. I don't quite remember.

CM: Because Molly, Cook had more of the life sciences, whereas Rutgers was more the let's get you ready for med school classical. Cook was more applied. I took Ichthyology, then I took Fisheries Management over on Cook Campus. I was thrilled to see those courses arise. Ken Able and Church Grimes. I think Ken stayed there teaching. I don't know where he is now. But Church wound up coming to work for NOAA years later. I'm trying to remember now because he was going to have a trip on my ship. My brain is just fog. I can't remember whether that actually came through or not. But I was just so excited that I would actually have a professor who taught me come out on the ship. I think we did have the trip, and it went well. I'm fuzzy on that.

MG: I read that Dr. Weiss was involved with the Sea Grant Program. So I wondered if you encountered her later in your career.

CM: To my embarrassment, I didn't know anything about Sea Grant when I was at Rutgers. It's been a fine program for a long number of years. I was eventually responsible for the Sea Grant program in my portfolio at NOAA in OAR [Oceanic and Atmospheric Research]. I didn't know much about Sea Grant when I started in NOAA. I met Sea Grant about ten years into my NOAA career, five or ten years. I had worked for Bill Gordon, who was the Assistant Administrator for Fisheries, and I was a special assistant to him as my first land assignment. Bill, after retiring from NOAA, went on to be the Jersey Sea Grant – either he was the director of Jersey Sea Grant – given his resume, he probably was or should have been. But Bill was at Sea Grant. He called me up and asked me if I would do something related to fisherman education. He thought I would be good at it, and I did, and I really enjoyed working with him then. That was my first exposure to Sea Grant, realizing how community-engaged Sea Grant was.

MG: Also, Rutgers had only been co-ed for a few years. By the time you arrived, were you feeling like the ratios were evening out, or was it many more men than women still?

CM: I think it was still many more men. My freshman year floor was all male. If I remember correctly, my junior year, when I was a first-year preceptor or dorm counselor, but preceptor is what Rutgers called them. I was on one of the co-ed floors, and we were given a special reminder that this is a co-ed floor and lead accordingly or guide people accordingly. We didn't have a whole lot of additional training on that, but because we were a co-ed floor, people were wanting to make sure things ran well. Some of the experiences that I did have that were co-ed involved were twofold. One instance was, we didn't know what date rape drugs were. But clearly, a young lady who was of habitual loyalty to her studies and her conservative approach to socializing, she came back in a condition that was very, very foreign to her. I think it was – her roommate knocked on my door with a sense of urgency and said that this young lady was in the shower and was not conscious. So I said, "All right. You get one more female on the floor; just pick anybody, the first one we see. Get a towel, and you're going to come with me, and we're going to go pull her out of the shower." So we got into the shower, I covered her with the towel, we shut the water off, we switched towels to get her warm, and had already called the university

police. They came and got her, and she turned out fine, ultimately, but she was obviously in an environment that was not what she had expected. Another one was really odd, where one of the females on the floor was getting threatening messages from someone, including having gotten into her room and written on the mirror and that sort of thing. It was always an open question as to who was doing this and the what, the how, and the why. The police were always involved. But the police very subtly intimated to me that there was a possibility that there was no mysterious person trying to harangue this woman, and that she might be just doing it on her own for attention. So we channeled that, cataloged that. Another event - we had a guy that I named Rasputin because he looked like the historic figure of Rasputin. He was a graduate student, and he was pursuing a similar academically-oriented young lady who wanted nothing to do with him. But basically, he was on the prowl for and stalking this young lady. Several times, we called the police to get their advice – the Rutgers campus police. They would come up, they would pull the guy out because he didn't belong in the dorm, and he would just be loitering around. I think it was '78, and it was either just before or just after one of my cruises. There was a big snowstorm – eighteen inches of snow. And Rasputin shows up. The word is on the floor – “Hey, Rasputin’s here.” Okay, here we go again. So I called the police. They said, “Look, this is like the fourth time. But we can't get up. There's eighteen inches of snow. We can't get a police car up there. You're going to have to handle it. Just get him out of the building.” I said, “All right, you got it.” The cop says to me, “Just don't kill him.” I went, and I got two guys that were big and burly and strong. And I'm somewhere in the middle. But I got this club that I had. So we go, and we confront Rasputin. The one guy was a Golden Gloves boxer champion. The other guy was a linebacker from Teaneck, New Jersey, and played really well – was not on the Rutgers football team, but he was solid. So the three of us confront Rasputin, and I said, “Okay, get him. Dude, you're leaving.” So the question was then, how do we make this last? Because we don't want him to come back. I said, “Let's check the windows.” So we drag him to my floor, which is the fourth-floor window; we open the window, we look out – still snowing like a son of a gun. I said, “Nah, too high?” We go down to the third floor. Finally, at the second floor, we said, “Yep, this is it.” So we threw – what is the word? Defenestrated? There's a word for throwing somebody out the window. Defenestrating, I think. So we defenestrated Rasputin. *Boom*, out he went. He landed like a snow angel, but he wasn't moving. I thought, “Oh, damn. We killed him.” The three of us go running out there. He was no longer there. His footsteps went off into the snow. One of the guys said, “Do you think we should follow him?” I said, “I got no interest. He got up, and he left. We're good. We're done.” So I got back on the phone; I called the police and told them what happened. The cop was saying, “You threw him out a window?” [laughter] But we did, and he was done. He came back one more time, the police arrested him, and we never saw him again. I don't know what happened to him. The guy was not right. He was just absolutely spooky.

MG: Like the original Rasputin, he was hard to put down.

CM: [laughter] Good point. Good historical context.

MG: Well, why don't we take a break for today because we're out of time, and we'll pick up with more Rutgers stories and questions the next time we get together? Is that alright with you?

CM: Sure. Sure. Sounds good, Molly. Thank you.

MG: That will be fun. I'll send you some dates via email. Let me know what's best for you.

CM: Sounds good.

MG: All right. Thanks for another fun conversation.

CM: Thanks, Molly. Thank you very much.

MG: Bye-bye.

CM: Bye.

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Reviewed by Molly Graham 8/24/2022

Reviewed by Craig McLean 11/13/2022

Reviewed by Molly Graham 1/7/2022