Mike McCallister Oral History Interview, June 26, 2014

Title
“Fourth Generation Beaver”

Date
June 26, 2014

Location
Valley Library, Oregon State University.

Summary
The majority of this interview consists of a detailed overview of McCallister's career in the military, including his numerous tours of duty as an officer in the United States Navy. In this, McCallister describes the circumstances by which he joined the Navy, his continuing education in Officer Candidate School and the Naval Postgraduate School, and his tours of duty in Guam, Vietnam, Hawaii, the Philippines and elsewhere. In recounting his career, McCallister notes his experiences assisting with the evacuations of Saigon and Phnom Penh, his work with early minicomputers, and multiple projects relating to meteorology and oceanography. He likewise recalls stints working for NOAA, the Snohomish County Emergency Management Agency, and a private sector company, Sound and Sea Technology.

Another theme of the interview is family, both nuclear and extended, and in this he discusses his family's deep roots at Oregon State University. He likewise reflects on his sense of campus culture during his time at OSU - including the impact of the Kennedy assassinations - as well as influential professors, his experiences as a member of Phi Psi fraternity, and his long connection with John Byrne, himself an oceanographer and former OSU President.

Interviewee
Mike McCallister

Interviewers
Mike Dicianna, Chris Petersen

Website
http://scarc.library.oregonstate.edu/oh150/mccallisterm/

Transcript

Mike Dicianna: Okay. Today is Thursday June 26th, 2014 and we're interviewing Mike McCallister, who was the Class of 1965 and part of five generations of Oregon State University history. Today we are in the Valley Library on the OSU campus. My name is Mike Dicianna, oral historian for Special Collections and Archives Research Center and I'm accompanied by Chris Petersen, Special Collections and Archive Research Center. Mike, welcome to—welcome home.

Mike McCallister: Thank you.

MD: First thing I'd like to do is kind of get a little bit of a biographical sketch, just of you as a child, where you were born—that type of thing.

MM: Okay. Well, my dad was soldier in World War II—Army. He flew as a photographic recon cameraman for one of the photo squadrons, and I can't recall the photo—the squadron number. But my mom worked up in Willamette Shipyard when she was pregnant with me, and my dad was overseas. And he came back I think about—I was about a year old, 1944 or so. He went to work briefly for the Corps of Engineers when he left the Army, when he retired—or when he was phased out of the Army. And then he worked for the Corps just for one year.

And the way family history has it, he got frustrated because the Corps ran out of money in November, and they paid everybody but they couldn't do anything. They just were on minimum pay, and coming into the office four hours a day basically doing nothing, and collecting a paycheck. And my dad got frustrated by that, and he didn't feel right about—I guess he had not been real thrilled with the Army, either. So between the Army and the Corps of Engineers, his experience wasn't what he thought it was going to be. And as an engineer he wanted, you know, he wanted to be a civil engineer and do engineering things. So he applied to Chevron, and was picked up by them; worked for them for a year or two in the Portland office, and then he got a transfer to Hawaii. That was 1947.

So we lived in Hawaii from 1947 to 1957, and I still really—the formative years for me were in Hawaii, and that's home. My wife Nancy was born and raised in Hawaii. In fact, we met here at OSU, and it was one of those typical mixer kind of a deal where, you know, "Hi. How are you?" "Where are you from?" "I'm from Hawaii." "Oh, whereabouts in Hawaii?" "From Kailua." "Well, where in Kailua did you live?" And it turned out that we were not neighbors, but lived about a block and a half from each other, and I'd been—the year before here at OSU, I'd been dating the older sister of her best friend. So, just casual dating. And we got to talking and found out I'd played basketball with her brother, who later became my fraternity brother and graduated OSU in food services.

Anyway, I was three years old or four years old—I think four years old when we moved to Hawaii—when we flew to Hawaii. And one sort of interesting sidelight: my mother, I said, worked as a—I think she carried bolts and nuts to welders at the Willamette Shipyard, and they were building the Victory ships at the time. There were, I don't know, 120 some Victory ships built out of the Portland shipyards collectively, and I don't know how many Willamette built. Anyway, the *Tuskegee Victory* was one of the ships that was built during that period.

Later on, the *Tuskegee Victory* plays a part in my career, because it was renamed the *Dutton* and turned into a survey ship—sister ship of the *Pueblo*. And I was her commanding officer. [0:05:00] So there was kind of an interesting revisiting of the old ship to the boy born in Portland. And both the ship and I had traveled all around the world by that time, but we got brought back together by the Navy.

Anyway, so we spent—in 1957 we left Hawaii and my dad was transferred to the home office in California, in the Bay Area, San Francisco. And I spent four year in high school in the east bay, in Lafayette, where my sister lives now, and went to high school there. Finished high school, applied to OSU, was accepted. The joke in the family was I could have gone to any school in the country, but it better be OSU. [Laughs] So anyway, I wound up here.

Started out in chemistry because that was my first love. And I was in the Honors Chemistry program, and I had a wonderful professor who was a retired Marine Corps Colonel, June Patullo. She was my advisor. And we got to talking one day, and she—I was a sophomore, and she said, "Why don't you take a Geology course?" I wasn't real strong in math. I scored well in math, but I guess it was motivational rather than capabilities. So she convinced me that geology would be

a good alternative for me because there wasn't—she said I could get work in geology without having to be a real strong mathematician. Not so in chemistry; most chemistry takes a pretty good math skills.

So I tried it and I loved it, and that was it. Geology was where I was going to be. Graduated in '65. In fact, I was the outstanding graduate of the department that year and got a scholarship, a National Science Foundation traineeship, for the next two years here at OSU.

MD: Okay, that's why I find you in this 1967 yearbook?

MM: Right. Then we got—Nancy's dad was very ill. We had planned to get married after I graduated—after both of us graduated in '67, but her dad had cancer, and they lived in Hawaii. And so we went back to Hawaii a year early; got married in '66, and came back. And I had sent my draft board notification that I was getting married, and I was a graduate student and on a fellowship and all this, and they sent me a little note back saying. "Great. You're 1-A. Report for your physical."

And so I had a number of phone calls trying to correct—trying to talk some sense into my draft board [laughs], which, this is right after the Tet Offensive in 1966. They were just looking for numbers, and they didn't care whether I was married—I could have had three heads and they would have, "You're hired." As long as I didn't have kids or flat feet, you know, I was cannon fodder. So I had worked two summers as an ordinary seaman on an oil tanker, and knew that I wanted to go—if I went into the service, I wanted to be in the Navy. And so I joined the Navy and went back to OCS.

Well, I [laughs]—I completely lost my focus on completing thesis requirements. In fact, I dropped my thesis the second—the last part of my last year, and took navy courses to cram for OCS. And as it turns out, it turned out well, because I went back to OCS and was regimental commander and the outstanding graduate at the regiment—at the Officer Candidate School that year, the November of '67 class. And from there [laughs], I had a set of orders to go to the *USS New Jersey* as assistant navigator. [0:10:00] She was in the shipyard getting outfitted to come to Vietnam. They had brought her out from Philadelphia all the way around to Vietnam. They did, in fact, do that. And I was set to be her—they had a commander picked out to be her nav officer and I had, because of the OSU work with the navy unit here, I'd done very well in navigation. I was the top student in my class in navigation.

And so they offered me this job, and I thought, "Geez, what a great opportunity!" You know? So I told them, yeah, I'd take the orders. And Nancy came out. It was a four month program at OCS, and she came out for the last month. And I showed her my orders, told her where I was going, and she burst into tears and said, "You're going to Vietnam?" Anyway we got—well, about two days later, two days after we had that little conversation, I got a phone call from the military director at OCS, and he said, "You've got to go to an interview. In fact, you've got to go to two interviews. You've got one with Admiral Rickover."

Because I had a physical science background and because I was one of the top students, Rickover always sort of harvested the top students to pick his people from. And the other interview was with a fellow from the navy post-graduate school in oceanography. And so I went to both interviews. And the Rickover interview was pretty short. He asked me—I'm six foot five; a hundred and ninety pounds at the time—why I hadn't applied for submarine service. And I said, "Well Admiral [laughs], the submarines that I've been on are pretty short." And he said—I don't recall all the things that he said. We had a nice talk. He had a reputation of being really tough on interviewees. You know, he had a chair that had one leg sawed off, and he'd put you in that chair and he'd evaluate you depending on how you reacted. And he had another chair that sloped down, and he did things to make you feel uncomfortable. At least that was the rumor.

But he must have had me written off to begin, with because he didn't—I had a nice interview. We talked about physics, which was—we talked about atomic physics, and I was interested because I'd been in atomic chemistry. We had some similar interests, and I had a fifteen or twenty minute conversation with him but really didn't talk much about the Navy, just talked about nuclear physics and chemistry. And he said, "Thanks for your time." And that was it, and I never heard from him again.

But then I had this other interview with a fellow from the post-graduate school, and I mean, he gave me the bum's rush. He really convinced me that with my background, because I had majored in geology in my last years, but minored in oceanography, and in fact, John Byrne was my minor professor. And I had a good enough background in the marine

side of geology that he—the Navy was doing a survey of the Pacific Ocean looking for reflectivity, acoustic reflectivity. Submarine sonar systems, surface sonar systems, can pick up noise that bounces off the bottom at far longer range than just water transmitted noise, sometimes. Under the right kinds of conditions you can hear—you can pick up sound from way across, hundreds of miles, if it bounces off of a reflective subsurface. And so they were putting together a map of the sea floor, and my marine geology background—I'd done thesis work up in Montana and studied land sediments, and that was exactly the kind of thing that they were looking for.

So they convinced me that if I came back to the postgraduate school with them, I could spend one year there, finish my OSU masters, and get a masters from the postgraduate school in oceanography. Get my geology degree, sign off on the requirements up here, and then they'd make me a navy oceanographer. [0:15:00] So I called up the commander who was going to be the navigation officer on the New Jersey, and I said, "Commander, I'm really sorry, but I got this offer to go to postgraduate school as an ensign and I got to take it. They've given me a chance to finish my degree." And he said, "Sure. Go do it." So I took the new set of orders.

The Navy does things in mysterious ways. I got back to the postgraduate school and went into the Oceanography Department, and they said, "You know, we're really sorry, but we can't enroll you as an oceanographic student." I said, "But you sent me orders." "No, that was a mistake. Oceanographers have to be lieutenants. Because you don't have enough experience at sea." Well, I had two summers and I was a sea scout for a three years, and I worked two years as an oceanography student under, you know, under Byrne. No, it didn't make any difference. You had to be in the Navy, a lieutenant, before you could be an oceanographer. But, you could be a meteorologist.

I had one course in meteorology at OSU. I knew clouds, and that was rain and, you know, lots of rain. I knew about what you know at OSU about meteorology. And so at this point Nancy and I had a baby on the way, and we were kind of committed to Monterey, so I said, "Yeah, sign me up. I'll do what I can do. Can I still work on my thesis?" "Well, we think you're going to be busy enough learning how to be a meteorologist, that we'd prefer that you focused on that. It's a one year program. We've got these other twelve fellows. You're senior because you graduated top of your class, so you'll be the section leader of these ensigns. And we're going to run all of you through, and then send you to be meteorologists in the fleet." So that's what they did.

So I spent a year as a meteorology student and got a certificate of completion of a one-year program, and went to Guam for my first tour of duty. And when I got there, I spent three or four months as a meteorologist, working into the watch bill. But they had an oceanography department in the back door. And I kept talking to the obs officer and the commanding officer, saying, "Geez, I really studied a lot of oceanography. If I can help you, I'd be really happy to."

Well, one of the oceanographers got transferred, and so they waived the requirement in the fleet for me to be trained as an oceanographer at the postgraduate school. So I wound up going to the Oceanography Department at Guam and I worked there. I was there for two and a half years as an oceanographer—well, two years as an oceanographer. So I got to do what I wanted. And then I came back. The guarantee was at the end of that first tour we would all come back to the postgraduate school and finish our master's degrees in meteorology, but because I'd worked as an oceanographer they allowed be to finish a dual degree in what they call geophysics, which was a combination of meteorology and oceanography. So I have—my educational background is somewhat checkered by the way that the Navy kind of turned me around from time to time.

Anyway, we spent two years—one year in Monterey, two and a half years on Guam and another year in Monterey. And then I was due to be sent to a fleet unit, and they had one of the fleet units, the one that I'd actually been picked for—a carrier—wound up going into the shipyard. They had some kind of an engine casualty. So they put me at Monterey at a large computer center, a numerical weather prediction and oceanographic prediction center, called Fleet Numerical Meteorology and Oceanography Center. And that's still a main command there at the post graduate school in Monterey—subsidiary command. [0:20:00]

So I spent a year there and then went to a carrier. And instead of a bird farm, it was a marine helicopter carrier, and we wound up working in Vietnam off the coast, and actually did the evacuation of Saigon and Phnom Penh.

MD: Which carrier was that?

MM: The *Okinawa*.

MD: Okay. Yeah, that's what I was thinking.

MM: She was the flag ship of the evacuation fleet. We had—I don't know—25 ships waiting—basically 90 days we just drove circles in the water until Phnom Penh fell. And then we brought the evacuees from Phnom Penh to the Philippines, spent 24 hours in the Philippines, and turned around and went back to sea for another 60 days off Saigon, and waited for Saigon to fall and evacuated Saigon. And we had about 45 ships in that evacuation fleet. And the *Midway*, which was the CTF-77 flagship, was there as well, but technically because we had the evacuation capability, the *Okinawa* was the flagship. So that rubbed some things the wrong way in the 7th Fleet hierarchy, because the marine helicopter squadrons were lower down in the pecking order than the—than the jet jockeys.

Anyway, it all—everybody was prepared for a war evacuation, but it wound being very, very quiet. We just brought people off the ship—onto the ship. The most exciting moments were, we had to—there were so many helicopters coming out to the ship, we had to bulldoze them off the deck and into the water. And we probably dumped 50 helicopters off our ship with a bull—

MD: Yeah, because the Hueys coming off the—

MM: They just kept bringing people—

MD: —they couldn't get back.

MM: And they were bringing the Air America birds that the CIA flew? Some beautiful helicopters and wonderful machinery, and they just—they're paving the sea bed out there about 40 miles off the seafloor off Saigon—terrible shame. Anyway, I spent two and a half years on the *Okinawa* and then my choice of duty was Hawaii, and we got Hawaii.

We went to the weather center at Pearl Harbor. And I spent three years there as the director of computer systems, data systems, and was their ADP security officer and also worked second hat for commander-in-chief of the Pacific fleet as his security officer, ADP security officer for a while, until they were able to identify a separate billet. Computer security—this is mid-seventies—was a joke.

And we had the first mini-computer. Everything was done on mainframes when I first took the job. We had what was called a Bryant Drum. It was this big around and eight feet tall, and weighed about 400 pounds. And it was pivoted on two little points, and it spun on very high revolution. And it had a head about two by, oh, two and a half, three inches, by an inch and a half. It floated across this drum and rode on it, and I don't know what the total capacity, was but it wasn't anything close to a megabyte. It was probably, you know, with this gigantic 400 pound drum probably had 250 or 260K of memory, which is incredible.

MD: [Laughs] Your phone has more.

MM: Yeah, yeah. [Laughs] Oh yeah.

MD: Your watch has more! Yeah.

MM: That's right. Anyway, then we graduated to minicomputers, and our weather center was the first activity in Pearl Harbor, to get minicomputers. So there was a great deal of interest from SINCPAC Fleet. When communications went out on that, there was a hurricane that knocked everything out. We had the only land line that was active in Hawaii. And so SINCPAC Fleet came down and he was using our computer link to Monterey to talk to Washington, DC. And that led to his interest in what we were doing, and so he got involved with our command, and I got seconded to him. As they went into minicomputers they needed somebody there who had enough background. [0:25:00] So anyway, I spent some time working with them.

And then after three years there, I left the family and went to an unaccompanied tour on the *Dutton* and that's where the *Dutton* came in. She was a hydro-survey ship. We did magnetics, bathymetry, gravity, basically drawing road maps for submarines. The typical deployment plan for subs was to leave their port of origin and drive to a location where they

knew—they'd drive submerged to a location where they knew the bathymetry very closely, very accurately. And they would reset their navigation systems, and then drive to the next location where they had good bathymetry. It was our job to give them that bathymetry. So we were essentially making road maps for submarines and, you know, other jobs as required as well—survey work.

And so I did that for a year, thirteen months, and then was offered a job with an organization called NORDA, the Naval Ocean Research and Development Agency, just absolutely incredible, down in Bay St. Louis, Mississippi. And you wouldn't think that Mississippi would be an oceanographic center, but Senator John Stennis had a lot of power on the Hill, and he wanted military activity—he wanted military activities down in his bailiwick. So he got the Army to build an ammunition plant, and he got the Navy to build its oceanographic center down in bay St. Louis.

And it was on a NASA test site called NSTL, the National Space Technologies Laboratory. The government had bought up a huge circle of land, 40 miles in radius, or something like that, because they were testing the Saturn rocketing units, and the engines would shatter windows when they'd spin them up, and the vibration from the engines would break the windows. So they had to own the land, basically. And they put the Navy out there along with the Army's ammunition plant.

And so as an oceanographer, that was where just about everything was happening. The oceanographer of the navy was there—or the commander of the Naval Oceanography Command was there. I'm sorry; the oceanographer for the navy has always been at the Vice President's Quarters in Washington, DC, at the Naval Observatory. But the oceanographer for the Navy works directly for the CNO, and the Commander of the Naval Oceanography Command is in charge of all the fleet activities, and the shipboard meteorologists and oceanographers.

So still, the Naval Oceanographic Office, which is sort of the operational arm of the Navy's oceanography community—they go out and do mapping and charting, not just for the submarines but for all types of shipping. Boutage and some of the other famous oceanographic—navy oceanographers were part of the Naval Oceanographic Office. It's been around for, oh, 120 years or so, maybe; maybe longer than that. Maybe I'm doing them an injustice. Anyway, no they had a sesquicentennial—150 years? So they've been—

MD: Oh, so they were right after the Civil War then? Yeah.

MM: Yeah, they've been around for 150. Anyway, I worked at NORDA for four years, and my job there was to develop acoustic software to help us detect Soviet submarines. Think of *The Hunt for Red October*. You know, that's basically what I did for four years, looking for Russian submarines everywhere—pacific, Atlantic, you know.

MD: Different sounds, and different propellers, and yeah.

MM: Yeah. And then I had a tour in the Philippines as commanding officer of the—this came about sort of indirectly [0:30:01], as a result of the anti-submarine warfare specialty. The job in the Philippines was for a meteorologist, and it was commanding officer of the weather office at Naval Air Station Cubi Point, which is directly across from Subic Bay.

MD: Subic Bay, yeah.

MM: Naval Shipyard—Naval Base. But the Soviet submarines had been—after we evacuated from Saigon and Phnom Penh, and so on, we left Cam Ranh Bay—the beautiful submarine base that we'd been using, and the Soviets made friends of the Vietnamese and so they'd deploy their subs out of—out of Kamchatka, and they'd come down and R&R in Cam Ranh Bay. And then they'd deploy to the Indian Ocean. And there were successive deployments, I believe eight in number, where the submarines went out through the Malacca Strait on the surface and then disappeared, and the next we knew where they were was when their periscopes would surface off of our aircraft carriers in the Arabian Sea, and flash little red lights through their periscopes—basically, war games. Bang—you're dead. And this made our admirals on the aircraft carriers feel a little uncomfortable.

So they had some resources in the Philippines. They had P-3s stationed there, but they didn't have an oceanographer who had an ASW specialty in meteorology, because that was this job was. So they looked at my record and said, "Ha! You're a geophysicist. You can do oceanography and meteorology. We've got this meteorology job, but we really need an oceanographer." So they sent me out there, and we spent a little over two years in the Philippines, and right at the time

that Marcos fell and that the Aquino administration took power. And they were housewives, and they really didn't have much of an idea how to run a government, and so it was pretty chaotic for the last six months that we were stationed there.

My son and I went out early, drove across country, had a great time. Visited the Grand Canyon, you know. He was eleven or twelve years old. It was father-son bonding time. We had a great time. Got there, stayed in the BOQ together, and then my wife and daughter came out. She was finishing high school, finishing first year of high school I guess—second year—yeah, second year, sophomore. And my wife was teaching, so they both had obligations in Mississippi. So they finished up and then came out in the summer. So we actually were there for two years and four months.

And so we, following our exciting tour of the Philippines—oh, by the way, we did figure out what was going on. Turned out that there's a huge amount of fresh water because of all the—because of the southwest monsoon. There's a great deal of runoff that comes down from Burma—Myanmar; excuse me—and the western slopes of Thailand, and in the Malaysian Peninsula. And all that water runs into a little pocket called the Andaman Sea. And the Andaman Sea, it turns out, has the lowest salinity water of any salt water body in the world, even far lower than the Arctic or the Antarctic, because of all this fresh water that comes down on top. Well, that fresh water comes south and meets water coming up from the Malacca Strait, and if you know the geography of the Bay of Bengal, these two tongues of water cross in a little spot called the Nickel Bar Strait and go out into the Bay of Bengal.

Well, there this very deep tongue of low salinity water, and the Russians knew about that. They had access to some German surveys that had been done back in the forties, I think, thirties or forties—old work, but very good. And they were taking their submarines—they were coming out on the surface through the Malacca Strait, but then they'd dive below the surface, and they'd go deep enough that our sensors couldn't pick them up. [0:34:58]

Typically a P-3 carries multiple types of sensors, and there's some that are very shallow and some that are mid-depth, and some that are very deep, and the very deep ones take a long time to reach active depth. So most of the time our ASW guys just go out and drop shallow or mid-range, and get a pretty good fix from those. But because of the freshwater, all of the acoustic energy was being—from the submarines who were deep enough—was being redirected deep. It bounced off the interface between these two bodies of water, these two water masses, and so they were undetectable a thousand yards away.

And once we figured out what they were doing and got the sensors deep enough, we could hear them for miles and miles and miles. So it was a good thing. You know, we had a big party. The VP got the squadron guys and the ASWOC, the Anti-Submarine Warfare Operations Center, and our guys who'd worked on this—we worked just night and day to try and figure out what was going on, and I mean, we sent carrier battle groups out, and dropped sonobuoys, and dropped bathythermographs, and eventually we built a picture of what the oceanography looked like, and figured it out. And the first time we tried it, it was solid.

And so after that every Soviet submarine that deployed, we had them nailed, and so we could follow them all the way across the Bay of Bengal. No more surprises for the Indian Ocean carrier battle groups, so they were happy, and so. Anyway, that was a success story, probably the most fun of my career, because we really had some—we had a real fleet problem and we were able to use hard oceanography to solve it.

So then we came back to Mississippi for a follow-on tour at the Naval Oceanographic Office. I was the director of the ocean survey program, which had been—that was the daddy of the project that I worked on when I was captain of the *Dutton*, commanding officer of the oceanographic unit on board the *Dutton*. We had four oceanographic units that worked for the commander of naval operations, and those four units went to his locations around the world, both Atlantic and Pacific. And so the office that managed that was also in Mississippi, part of the Naval Oceanographic—it shared spaces with NAVOSHNA. So I was sent there.

And while I was there one of our ships was operating in the south Atlantic and pulled into Rio de Janeiro during carnival, January. And there was a big storm that blew up, and a couple of tankers dragged anchor and punched holes in the side of our ship, Navy ship. So we lost—they didn't sink her, but we lost all of the survey equipment. And so we had a job to do. We had money to do it, but we had no ship. So I hired an NOAA ship.

One of the NOAA ships was available for a significant part of the year, and in six weeks' time, NOAA was able to convert her to do classified Navy surveys and do them to within navy specifications. And I was pretty impressed with the go-to attitude that NOAA showed, and I had a conversation up in a restaurant in Seattle with the admiral in charge of the NOAA fleet, and he said, "Well, how would you like to come work for us?" And this was right about the time that the Berlin Wall fell and the Soviet Union had come apart at the seams, and there were no more Soviet submarines. So basically, my job was [laughs] going to go away, or at least going to lose a big part of its impact. And I said, "Yeah, I think I'd do that."

And so he transferred me. I became—one day I was a Navy commander. The next day I was a NOAA commander. And the next year I was a NOAA captain. So I spent eight years and change in NOAA, driving two of their ships, and as associate director of one of their research laboratories in Seattle [0:40:01], and running their ship time for the NOAA fleet, 500 days or so of ship time, and coordinating with the Navy, who owned some of the ships that we were doing surveys on, and with the UNOLS, University National Oceanography and Laboratory System, who with the Navy owned all the ship time, Scripps, and Texas A&M, and Woods Hole, and OSU, and all the big oceanographic—

MD: Yeah all the big sea grants. Yeah,

MM: Yeah, all the big oceanographic universities. And so I did some exchange time with the *Lacona*—*Ecola*—?

MD: *Acona*, yeah.

MM: *Acona*, yeah. And we brought oceanographers from OSU on our ship. In fact, we were the first—I was CO of the *Discoverer*, and we were working with Events Project down in Newport, and we got word the Navy was using—we were using a navy system, the navy surveillance system that hydrophones on the seabed, to monitor the sea floor volcanic activity. This is one of the ways that we hoped to prevent, the Navy and NOAA, to prevent the navy system from being shut down. A good friend of mine was running the navy surveillance system at the time, and I had worked—I was working at the laboratory.

And we held a national conference of the top 200, 250 oceanographers in the country, to think up ways that we could use the navy surveillance system for scientific purposes. Geology was one. Tracking whales was one. The Coast Guard was there. They came up with tracking illegal fishing activity, and drug smuggling, and things like that. So the Navy was able to preserve at least part of their surveillance system to do other things, and one of those things was to monitor vent activity along the Juan de Fuca. And I had just taken command of *Discover*. First week in command, we got word from the Navy that they detected volcanic eruption activity along the Juan de Fuca Rift. And so we piled a bunch of OSU and University of Washington scientists on board, and just headed out for the event, 200 miles off the Oregon-Washington coast, and spent six weeks driving north and south, back and forth, picking up—we had a Canadian submersible on board, and actually the first pictures of submarine seafloor volcanic activity came from that trip. We got a submersible right down onto one of the black smokers, and got pictures of it coming up.

And I mean it was like—it was so exciting! And these scientists were just running around, "Ah!" They were drinking out of the fire hose. Nobody wanted to go to sleep. Everybody—we had two pilots for the submersible, and it was very complicated work. These submersibles—the robotic arm that controlled the submersibles had about six degrees of freedom, and you know, you got fingers, and you got a wrist, and you got an elbow, and you got a shoulder, and that's only four. And these guys were contortionists. They were incredible mechanics, or mechanically inclined.

But they'd wear down. I mean, they could work for an hour, an hour and a half, and then they'd switch off. But after switching off for eight or ten hours, the scientists were just, "Come on! Come on. One more vent! One more. We've got some activity going on." [Laughs] We had to say, "Okay, guys. Let's go back. Let's do something else." We had other sensors that we could drop down, sample the water, do other things. So, anyway.

MD: Give these guys a rest. Yeah.

MM: Yeah. We did give them a chance to get a rest. So, well, that's pretty much my military career. I retired from NOAA in 1996, and went to work immediately—I'd been volunteering during the summers, or during the winters. When the NOAA ships were home I'd been volunteering with the county Emergency Management Agency, because I had some flood background, through OSU mostly, geology of flooding and so on [0:45:01], and hydrology.

And so I had been one of their kind of their senior people in this volunteer agency, and one of the guys decided that he was going to—one of their permanent staff that he was going to go on vacation to Australia, and so they asked me if I could step in and fill his job, and, "We'll even pay you while you're doing this, and then when this guy, Mike, gets back, you'll have a chance to look for a job." So, okay, I'll do that. And I worked for them for ten years. Mike never came back. He married an Australian girl and stayed down there, you know. I don't know who got the better end of that deal, but anyway.

So I worked for them for about ten years, and it was during the time period that 9/11 happened, and our agency, which was an independent agency, worked for the country government and twelve cities. But we had our own director and assistant director, and a couple of communications people. And all the money that was coming in as a result of 9/11 was coming into our tiny agency. And we had built a network of firefighters, fire agencies, law enforcement agencies, and medical agencies, and each group had its own panel to decide how best to use the monies that were coming in for the benefit of the most of the agencies. Well, the county was the big dog in our management structure, and even though we weren't part of the county government, we had Snohomish County Emergency Management in our name, and they were paying probably 60 percent of our tab because it was by population.

So they decided—the County Exec was a character, and he decided that he wanted to get his hands on the money that we were getting and that was going into the fire agencies, and police, and then law enforcement and medical agencies. So he basically took over our agency, and the director, who was an Army colonel-reserve, and retired, and myself, NOAA/Navy, both retired the day that he took the agency over. And then I went to work for—I got picked up before I retired, actually, again, for an agency, an ocean engineering firm, Sound and Sea Technology. A lot of Navy work, a lot of support work for navy anti-submarine warfare—the kind of people that I'd worked with, you know—

MD: Full circle, yeah.

MM: —twenty-odd years in the navy. So basically I'm still working for them. We're doing offshore energy research. We're working on a tidal energy project in Puget Sound, wave energy project off Oregon, other wave energy project in LA. We did some work with the University of Hawaii and with the Navy, looking at thermal energy conversion, using warm surface water to cool—the use of cold deep water to cool a Rankine cycle, or basically a refrigerator-type cycle of thermal generation of power, first off Pearl Harbor and then off Kauai, at Barking Sands, to run the entire navy base at Barking Sands. But that didn't—well, that coincided with the crash of the US government a year ago. So the Navy decided to take all of its money and not spend it on frivolous things like renewable energy, and spend it on bullets and manpower, and ships.

You've got to keep the ships in the Navy, and the sailors. So, you know, our project got shutdown. Our Navy project got shut down, but we're still working on the tidal energy group. [0:50:04] There's a consortium that you probably know about. It's Oregon State with wave energy, the University of Washington with tidal energy, and it's funded in large part by FERC, Federal Energy Resource Council, or whatever they are. It's federally funded, and OSU, I think, really gets the lion's share, because there's more wave energy potential than there is tidal energy, mostly because of the politics of getting anything done—getting anything installed. We've been working on this tidal energy project for six or seven years now in Puget Sound, and it's a real struggle.

MD: Well, it's running up against—I know that there's been a lot of blockages with the—

MM: Yeah, there's been all kinds of things.

MD: A fish might swim into it, or something.

MM: A fish, a whale, a killer whale, a diving bird. And this is 60 meters down—200 feet, on the seabed, you know. But they're worried about little birds getting chopped up. And the thing turns eight times in a minute, so the rpm is pretty minimal. Fiberglass blades, not going to chop up any fish or whales, but there's a cable system that has objected to us being too close to the Japanese cable, fiber optic cable. It's been a nightmare. But I think they finally got all the problems licked, and it looks like next summer will be the deployment. They're an Irish turbine—an Irish turbine company that will be putting their equipment in the water. And our company will do the connection. We'll do the installation, the cable

connection, and turn the cable over to the PWC for the public work—I mean, the public utilities for connection to their power grid. So, that's my career. That's my life in a nutshell. Sorry. That's a lot of talking.

MD: [Laughs] Normally in an oral history interview, a person, you know, you got to drag every little thing out.

MM: Oh.

MD: And I stop and I ask you questions, but I was so incredibly enthralled! I did have a couple of points that I wanted to back up on, and just hit a little bit. As a child and especially in this family, you probably grew up with kind of an idea of this Beaver heredity that you had. How early did that start?

MM: I think the first I remember—we came back from Hawaii on a visit to the mainland when I was eight years old. And my grandfather lived in Corvallis down on—just off Monroe, a block off Monroe. And he'd always said he had—well, my mother's mother lived off—right across the railroad tracks from the Navy Yard. My father's mother had passed away, but his dad lived off Monroe. And they both had university students living in their upstairs apartments, and so, you know, I'd go stay with them when we came over. We came over for a month vacation, I think, and I'd stay with either my grandfather or grandmother, and I'd see OSU students.

And one kid that was living with my granddad bought me a Beaver mug, and that was—I think that was probably my greatest treasure as a kid. I drank milk; I drank everything out of my Beaver mug for—I'm sure it broke somewhere along the line, but at least it lasted until I was fourteen or fifteen. So I had years of that Beaver mug. And our family—my mom was a Beaver. My dad was a Beaver. My aunt and uncles were Beavers. My brother and sister were both Beavers, but they're ten years and fourteen years younger than I am, so they got the same inoculation that I did. And their spouses were both Beavers.

MD: It's a heredity thing. Now, were you—?

MM: [Laughs] It is. My wife keeps telling me that if she scratches me, I bleed orange, so.

MD: Bleed orange? Now, were you aware of how far back in the history of the college—I mean we're talking back to Finley, back to the beginnings of the college? Were you aware of that at that time, or did you learn this later?

MM: Not really. Not as a high school kid. [0:55:01] Not until I got interested—well, my last year in high school, I think I probably got the indoctrination then. That was the year my granddad died, and my dad was back and forth, and he was bringing things back to California from the family, from both Finley and McCallister side, and some from Cauthorn as well because, my grandmother had had—her mother had been a Cauthorn and her father had been Finley. So she had stuff from both sides of her family up in the attic. And my dad was sorting through all this, you know, he'd tell me about it, and we talked about OSU.

I mentioned that I was interested in chemistry, and Cal-Berkeley had accepted me in chemistry, and I was really interested in Cal because Livermore Radiation Laboratory was right there on part of—was part of the Cal campus. And I was thinking, "Boy, this would really be cool to be right here at Cal." But I think all of the stuff that was coming back from my granddad's house, and all the things that my dad was telling me, made me realize that, you know, and I'd been to Corvallis a number of times, and I knew what a great town it was. And I had family still here. My grandmother still lived in the house at that time.

So I don't know the deciding point, but it was—it came down to Cal or OSU. I think I'd gotten accepted three or four places, but Cal and OSU were the frontrunners, and OSU wound up my choice, so. But the OSU indoctrination began while I was here with my granddad, when I was eight. That's when I really remember getting the full pressure, or the full picture, of what the family—what OSU meant to our family. And my granddad was a great Beaver fan. He was another, you know, orange guy. You cut him, and he bleeds orange so. My grandmother, my mom's mom, worked at the either the chem lab—I think she worked for Doc Caldwell. Do you know—does that ring a bell?

MD: Yeah, I've seen the name. Yeah.

MM: He was a chemist, but he worked for the Industrial Chemistry Department; worked over here—there used to be an old building along the other side of the tracks that was—I'm not sure what all they had in it, but it was an industrial chemistry part of the—

MD: Yeah, all that stuff moved out to the far end of campus, yeah.

MM: In fact, that year, before I got—after I got drafted and before I went into the Navy, I went over and took a class from Caldwell, because I knew I wasn't going to finish my thesis and I figured, you know, the Caldwell's were friends of my grandmother's, and my grandmother worked for him years. So I figured I'd just learn a little bit more about industrial chemistry, so I took his course. But my grandmother worked here. My grandfather taught here. My father's father—

MD: He was just a big part of early OAC.

MM: Yeah, yeah. Well, and then my great-grandfather, you know—I don't know whether he was in the first graduating class or the second. There's been some discussion both ways, and I think you're right. I think it was the second. The story was he was supposed to graduate in the first class, but something happened and I'm not sure. [Laughs] Maybe he couldn't make it.

MD: Yeah. [Laughs] I might be able to track that down.

MM: Yeah. I don't know. But William, who was great-great-great uncle, I guess, or great-great uncle, was the first president. And my mom, like I said, tracked the family through——this was while I was at OSU, she made some of these connections. She was down in Southern California. My dad moved down to Southern California when I was up at OSU, and that was pretty much—I never went back home. Because of the Navy, I wound up away from home for the rest of my life.

But anyway, it was a pretty good indoctrination job. We're trying to do the best we can with our grandson, and our daughter's pretty much a Beaver born and a Beaver bred. [1:00:01] In fact, she's a swim coach. She teaches middle school, and coaches both middle school and high school swimming, and so she gets a lot of kids that don't necessarily—she teaches science. She gets a lot of kids that don't necessarily come to her science classes that she coaches, and she's coached several OSU swimmers, or swimmers who wound up going to OSU, and to the Navy and at OSU. She went through the Navy unit here, and graduated as a Marine second lieutenant. Don't know what happened to it. I think it was the uniforms that got her.

Well actually, the head of the Navy unit at the time when she went through was a Marine colonel, and he sweet talked her and I'll never forgive him. [Laughs] He had been the head of women's programs in the Marine Corps before he came here, and he told her all the wonderful things that the Marines were doing with women. And she got into the Corps, went back to Quantico and they made her an assistant company officer, or something like that. She wanted to be in intelligence, and you know, she had twenty years in the military. She'd been my daughter, and she'd gone and she'd lived on every military base in the Pacific, Guam, and the Philippines, and Hawaii, and California, and San Diego. She'd been on ships. She knew what the military was all about, and they were giving her the runaround, and they were, you know. So when the first Gulf War ended she said, "Yeah, that's it. I'm out of here." But the Marine Corps made her a good teacher.

MD: Now, where does she teach?

MM: She teaches in Mukilteo, Washington, close to where we live. So we're eight, ten miles away.

MD: And so the sixth generation is just sitting there, waiting?

MM: Yeah, they're being primed. We're working on them.

MD: Okay, because that would—I mean, yeah. I mean, there should be no choice.

MM: They're going to be out-of-state students, though, so it's going to be tough for them. I keep telling them there's no guarantees. They've got to work hard. We'll see.

MD: [Laughs] Well you're just—you're a treasure. I have just a couple quick things about your campus life when you here, because we are learning about the different alumni from the various different eras, and you were here during a pivotal time in the United States history. I mean, things were changing, and you were actually on the military side. Did you run into any of the campus protests against Vietnam? I mean, was it really a fight between the two?

MM: Well, I got spit on when I wore my uniform back from—well, that's a different story. Don't want to get into it.

MD: Yeah, I was called a baby-killer myself, so.

MM: Yeah. Yeah, right. No. The things that I remember, the pivotal things that I remember at OSU were the Kennedy assassinations. I mean, aside from sports. [Laughs] The Kennedy assassination really affected me because I had—I bought into the whole Camelot. You know, the whole thing. He was a Navy guy. What's not to like about that? And he had a beautiful wife. You know, he was a brilliant politician, handsome, beautiful family—just everything that a college kid could relate to or wanted to relate to. And I was a Kennedy man. I mean, you could scratch me anywhere and I'd bleed Kennedy. And when he died, it really rocked me. In fact—

MD: Did it rock the campus you think?

MM: Yeah. Yeah, it did. Nancy and I were supposed to go to a dance or a party that night, and we wound up just sitting in the car and talking—just couldn't, you know, couldn't put it aside. [Sighs] And then Bobby came to campus, and Nancy was the—we got a picture of Nancy with Bobby at the Corvallis Airport, giving him a lei or something, or flowers or something, as head of the Beaver Belles. And his assassination was another family tragedy. We felt that. That was later on. That's when I was already in the Navy. But his visit came at a time when we were still [1:05:01]—Nancy and I were—weren't politically motivated. We were not part of the—I was a geologist, for crying out loud, and she was in elementary ed. We weren't interested in campus politics, not particularly, anyway.

But those are the two things that I remember that really stood out were the two Kennedy—the Kennedy assassination and Bobby's visit. You know, there were a lot of things that happened during that timeframe. The Vietnam War started, and there was a lot of energy at college about the Vietnam War. But I was a student. I was in love with geology. I really did. I found my niche, and the one regret that I had after 50 years of working, 45 years of working, is that I never really got to work as a geologist, as a hard rock geologist.

I had always wanted—from the time I took my first course, that was what I wanted to do. Wilkinson, Oles—some of the profs—Doc Wilkinson, gruff old bear of a guy, little bear. I mean, he wasn't a big guy at all, not really impressive in stature, but he had a heart as big as the outdoors. My first experience with him was I was working as—I was cleaning the MU at nights, early morning. Get up at three o'clock in the morning, go to the MU at four o'clock. Clean the bathrooms, and I had an eight o'clock class with Wilkinson. And he was the head of the department, and so it was Mineralogy or one of the more important core classes for the Geology Department. And I would sit in the back of the class, and lean my chair back against the radiator and go right to sleep, infallibly. And he would throw erasers at me and he'd bean me, you know. About every third time he'd catch me on the head and wake me up.

And one day he came in and he called me into his office, and he said, "Mr. McCallister we've got to stop this. You know, I'm throwing my arm out trying to wake you up, keep you awake in class. What are we going to do with you?" And I said, "Well sir, I'm sorry. I just am burning the candle at both ends, I think, sometimes." So anyway, he helped me to get a job, and later he was the one, I think—I'm sure—who got me the fellowship. He was instrumental in getting me that scholarship with the feds. Anyway, great guy.

MD: Taubeneck?

MM: Taubeneck, Bill Taubeneck? I had him for Igneous and Metamorphic Tetralogy, another brilliant guy—and Keith Oles. We had an on-again, off-again relationship. I had him for my first geology class. He was the best prof—I thought he was the best prof I'd ever had. I had him for field camp, and I thought, "Geez, this guy hates my guts! What is it that I've done?" You know? [Laughs] But he lives up in Linwood, and we've bumped into each other. In fact, he came to my two changes of command with the NOAA ships, and we got to be pretty good friends, he and his wife, and Nancy and I. In fact, we went to his wife's funeral last year—year and a half ago. But we've made up since then. [Laughs] In fact, I think

he sort of thinks of me as one of his successes. Being in the Navy—that really did it for him. You know, I was in the Navy and then in NOAA as an officer, and I think—I don't know what his military background was. I think he was Army before he went into—he worked for Union Oil Company.

But Oles was a good prof. In fact, the first day of class, he stood my daughter up in geometry class, and said [1:10:00]—let's see, the story. He said, "Is there and Erin McCallister here?" Everybody's looking around, and this is a class of, I don't know, 100 students. So she said stood up, and said, "Yes, I'm Erin McCallister." And he said, "Well, you're going to have a tough time making a grade in this class." [Laughs] She's speechless, you know? He said, "Anybody whose father and mother both took classes from me is here just to make me feel old, and you're going to have to do a good job!" [Laughs] Anyway, that's her story.

So we have loved our connection to OSU. In fact, I think OSU is keeping my mother alive right now. She lives from season to season. She follows the baseball—she followed every baseball game. I think it broke her heart when we didn't—

MD: Get that last game?

MM: —didn't get that last game, yeah. But she's back on. She's watching—she watched all the three World Series games. So, you know, she's a good Beaver supporter—a great Beaver supporter—good sports fan. She's quite a gal.

MD: We really look forward to meeting her. That'll be really special.

MM: Well, you need to hurry.

MD: We will.

MM: She doesn't have a lot of time left, I don't think. But she's still pretty *compos mentis*, all things considered.

MD: Good. And how old is she now?

MM: Ninety-five.

MD: Ninety-five? That's what I was thinking.

MM: She had her ninety-fifth birthday last week—two weeks ago, now.

MD: Now, did you go to see the Rose Bowl in '65?

MM: Yes.

MD: Did you go?

MM: Nancy and I went. She was a freshman. It was '63.

MD: Well, our Rose Bowl win in '65, yeah.

MM: Was it '65?

MD: Yeah.

MM: I guess she was a sophomore and I was a senior, and we went down. It was '64, but the Rose Bowl—because yeah, yeah.

MD: New Year's Day of '65.

MM: That's right. Right. Yeah, we went to our—

MD: Defeat.

MM: —chagrin. But Nancy was working. When I was back at OCS she was working training table, serving the football team the year we knocked off three number ones? Or knocked off two number ones and tied USC, I think.

MD: Yeah, the Giant Killers.

MM: And then everybody got sick, and we lost to BYU or somebody like that. Wound up second in the nation. And one of my roommates was Mike—kicker. He was the one that scored the three point field goal.

MD: Yes. It was O-something.

MM: No. No, it wasn't O-something.

MD: I'll look it up and we'll add that in.

MM: Yeah. And he had been my fraternity brother and roommate. Anyway, Nancy got to know all the football players real well. They left her alone, because Steve Preece lived upstairs from us right after we got married, so he kind of kept his eye on her, and made sure that she didn't get hassled by any of the [laughs] big defensive line guys or offensive line men. Offensive, you know. So anyway, we've always been Beaver fans. I can't—can't think of a time when Oregon State didn't play, you know, central part of our—

MD: Existence.

MM: —in our lives.

MD: Well like I say, you are truly part of a dynasty here at OSU.

MM: Yeah.

MD: And it has been an honor to be able to include you in our project.

MM: Yeah. Well, you got more about Mike McCallister, probably, than you wanted to get about the Finley's, but you'll get the picture from my mom. She has done all the research, and really will tell you what the family connections are. The Finley family gravesites are in the cemetery just south of town. And there's a Finley headstone, and then there's Hugh McNary and Emma Cauthorn Finley, and then right next to them is Mark McCallister and Ada Finley McCallister. And then there's some other Cauthorn's there and some other Finley's, a couple other Finley's [1:15:00], but I'm not sure of the connection. But when my mom's gone, she's very worried that there won't be anybody to keep an eye on the graves. On McCallister there's an old pioneer cemetery east of Pratum. You know where Pratum is?

MD: Yeah.

MM: Yeah. Where some of our family, McCallister family, was buried. And there was a big McCallister headstone. Had a stagecoach, and you know, all carved in granite, four feet high and three feet wide and a pretty headstone. And about eight or ten—we used to go out and do the graves out there as well, but about eight or ten years ago somebody stole—I mean this is like a 500 pound granite headstone, so big, heavy, thick, you know? Somebody just pulled it right up out of the ground and drove away with it. What do they do with something like that? Is this a collector? Is a guy named McCallister collecting headstones? Or is it somebody who's just looking for a big piece of granite and they just, you know, scrape off the old ones?

MD: It's on somebody's countertop.

MM: Yeah. Yeah, who knows? Anyway, my mom's worried about the Finley headstone going away and about the other graves. We've tried to, you know, assuage her and tell her that my son is pretty dedicated to coming down, even though he didn't graduate from OSU. He graduated from SPU, Seattle Pacific, but he's taken on his generation's responsibility. And Connor and Ryan, our two grandsons, they both came down with me this year, and they did a terrific job working on the gravestones and cleaning them up, so.

MD: Yeah, well you bring them by the archives and we'll—

MM: I'll do that, next time we're down—

MD: —we'll let them touch their history.

MM: Well, two years ago we came down and we were here during the playoffs, so we got to see one of the OSU games. Ryan wasn't with us. Connor came down, and he and I and Mark, my son, went to the game. And we just thought that was—you know, OSU won the game, of course, so it was a great game. This year we were hoping that we'd be here during the playoffs but it just didn't work out. I think we were playing Cal at Cal that weekend, when we were down. But I think probably now that the boys are going to be in high school, I'm going to try and get them down on a regular basis to come to games, or something, get them more acclimated to the campus. Got to get them out of the University of Washington's sphere of influence! The last thing we want is for them to wind up Huskies.

MD: [Laughs] Oh, that would break this dynasty. And they've got to understand the idea of a dynasty, so.

MM: Yeah, well Connor's middle name if Finley, so he's been instructed pretty thoroughly. Whether he makes it or not, we'll have to see.

Chris Petersen: Can I ask you a couple questions, Mike?

MM: Sure, you bet.

CP: I'm interested in knowing a little bit more about your fraternity experience.

MM: I was at Phi Psi. I was a Phi Delt. My dad was a Phi Delt and he was a jock, and I was a student. And right away, I didn't fit in. I stayed at the Phi Delt house during rush, and it was Terry Baker, morning, noon, and night, and drink bee, and it was not what I was looking for. And for whatever reason, the Phi Psi house was right next door, and they put a good rush on me, and I chose them over the others. I won't say it was—it wasn't a widely successful relationship. I was more interested in college than I was in fraternity life. One of my fraternity brothers and I played bridge, and so, I don't know, we entered the all-school bridge tournament a couple times. [1:20:00] We played bridge till all hours of the night, but that was basically my fraternity life. That, and I worked as a pot cleaner for our cook as an odd job.

And I worked out over here in Weatherford Hall as a line supervisor, supervising ten servers. I can't claim that the job was not—there wasn't some underhandedness involved. My aunt was the dorm kitchen manager at the time, so they needed a supervisor and I was big, so [laughs] instead of being the milk bottle changer, I got to be the line supervisor, but still had to change the milk bottles. Anyway, that was Aunt Doris, Doris Williams. She was the nutritionist and the kitchen supervisor for Weatherford Cafeteria for, geez, I don't know, years and years, probably twenty years.

And I got to know all the cooks real well, so that was after I moved out of the fraternity and I was a graduate student. All the gals would give me chicken hearts, and chicken livers, and gizzards—anything that college kids wouldn't eat. You know, the regular students turned up their noses at the necks, and gizzards, and livers, and parts like that, so I got all the chicken gizzards I could eat [laughs] when I was in college.

I was not your typical fraternity boy at all. I had friends in the fraternity house, but I moved out with one of my—I moved out my junior year with one of my senior classmates, senior housemates, and we rented an old beat up house right next door to my grandmother's house, as it turned out. She'd already passed away at that point, but it was on the other side of the—Navy Yard had railroad tracks down there, so.

CP: You mentioned too an early connection with John Byrne, and I presume that lasted for a while?

MM: It did. I'd see John—in fact, when I was working for the Navy, I had money that we could take around and hire out to the universities. And I tried real hard to get some money to OSU, but I could never get any—I could never get the right level of interest. I wound up spending most of my money down at University of Texas, to the applied physics lab down there. They had an acoustics division in their lab that was just terrific, and we wound up doing some work out at Pearl Harbor with them.

And actually I got a trip to Australia and New Zealand out of my relationship with him, because the Australia/New Zealand navies were very interested in the things that we were developing for the US Navy. And we did some things in the Mediterranean that they felt had potential crossover for the Tasman Sea. Mediterranean is a big pond of water with a whole lot of little boats in it that all make diesel noises. And the Soviet submarines in the Mediterranean at the time were all diesel. They'd send their nukes out into the Atlantic and Pacific, but all their old diesel boats would run back and forth in the Mediterranean. You couldn't tell them from you know, Guillermo's fishing boat, because they all made the same basic kinds of noise.

So we had a system that we developed when I was with NORDA that was very successful in separating the wheat from the chaff, and the New Zealanders and the Aussies got real interested in it. So I spent three weeks on a tour with the Australian/New Zealand navies, doing exchange stuff with a couple of people from the University of Texas. And they wound up getting the real plum.

One of the gals I worked with—she was an Australian national working on a classified Navy project at the University of Texas. She got hired by the New Zealand Navy to do a project for them as, still as a University of Texas. It was very complicated. Anyway, it was a neat job for her. And actually, the New Zealand navy wound up very pleased with what they got out of it, I'm sure, so. [1:25:00] But that sort of deviated from your original question.

CP: I'm sure you'll see John Byrne—

MM: John Byrne

CP: I'm sure you'll see John Byrne tomorrow.

MM: Yeah, I've seen John a number of times at Beaver games up in the OSU—what do they call them?

MD: The boxes.

MM: Yeah, the box back there at the south end of the field. Every third year my mom takes one of us kids. Because she's donated money, they give her a couple of tickets every year, and so one of us, Mark, or Richard, Laurie or myself, gets to go to the game, and so we've been taking advantage of that. And I used to see John regularly. We kept in touch. Unfortunately—he knows that I tried to get money to the Beavers, but I think he was—I don't recall whether he was director of research at the time, or whether he had already moved up to the presidency, but he didn't have really—there wasn't anything he could do about it. We had to find somebody that had the right interest, and there wasn't anybody that was just interested in the right stuff to help the Navy out. So anyway, the University of Rhode Island and the University of Texas stepped up, Scripps. We did some work with them.

MD: Well, I think your time is probably running a little short, so we should probably close.

MM: Yeah, I need to get over to the—

MD: Reception area?

MM: —the program starts at five o'clock, or something starts at five o'clock.

CP: Well, thank you very much. This has been really good.

MM: Well, thank you Chris, and thank you Mike. [1:26:49]