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McClellan, David ~ Oral History Interview

Suzana Mic

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Voices from the Fisheries
166 Water Street
Woods Hole, MA 02543

Interview with David McClellan by Suzana Mic

Summary Sheet and Transcript

Interviewee

McClellan, David

Interviewer

Mic, Suzana

Date

August 15, 2016

Place

Southeast Fisheries Science Center
Miami, Florida

ID Number

VFF_MI_DM_001

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Biographical Note

David McClellan was born on August 18, 1949 in Honolulu, Hawaii. He worked for NOAA at the Southeast Fisheries Science Center as a Fisheries Research Biologist for 37 years, conducting countless dives to gather data on the fisheries.

Scope and Content Note

Interview contains discussion of: Southeast Fisheries Science Center, collecting fisheries data, NOAA divers, evolution and effect of data collection technology, benefits and disadvantages for working for a government agency, Reef Fish Visual Census Program

David McClellan's interview describes his experiences working as a fisheries research biologist at the Southeast Fisheries Science Center. He discusses acting as a dive supervisor, as well as the Reef fish Visual Census Program, or RVC, that he helped design.

Indexed Names

Ault, Jerry
Beardsley, Grant
Bohnsack, Dr. James
Buchanan, Chester
Carthy, Raymond
Harper, Douglas
Javis, Jack
Powers, Joseph
Revis, Louis

Smith, Steven
Siebenaler, Brandy

Transcript –DM_001

Suzana Mic: Yeah, yeah, it was very. All right, so. It's, it's recording, I'm just going to let you know, I'm going to, sometimes during the interview I'm going to put these headphones on just to make sure--

David McClellan: Right.

SM:--the sound is right. So I'm going to go ahead and start. I have this little paragraph that I need to read. So this interview is being conducted as part of the Voices from the Science Centers Project, funded by the Northeast Fisheries Science Center. It is also part of the Voices from the Fisheries Project that is supported by the National Marine Fisheries Science Office of Science and Technology. My name is Suzana Mic and today I'm speaking with David McClellan?

DM: McClellan.

SM: McClellan, at the offices of the Southeast Fisheries Center in Miami, and the time is 8:50, I believe, let's see... 8:57am. So I, I will just let you know that if you feel uncomfortable with any of my questions, please tell me you don't --

DM: Okay.

SM: -- you know, have to answer them. And if you need to take a break also please let me know --

DM: Okay.

SM: --and we can take a break. I'll ask you if you could tell me the date and place of your birth?

DM: August 18, 1949 in Honolulu, Hawaii.

SM: Okay. Honolulu, that's nice.

DM: Yeah. My father was in the Marine Corps.

SM: Oh, I see. So, um, could you please give me an overview of when you start working, started working for the Fisheries Science Centers, and what positions you've held throughout the years until you retired?

DM: I first came to the, to the laboratory in, I think it was April of 1977, and I was working for the billfish program, part of the tagging program under Chet Buchanan, and Grant Beardsley was my supervisor at the time. And, so the first two or three years was billfish research, blue fin tuna research. I was sent out in the boats for tagging, and of course, office work. I believe it was about 1980 I transferred over to the Shark Investigations Program, with Louie Revis, was, who was running, and worked with him for two years on sharks, I guess

you could say, up and down the Gulf Coast, all the way up to, I think it was maybe North Carolina. And that was really interesting. Then in '82 when Jim Bohnsack was brought in to do a post-doc project under Grant Beardsley, Grant asked me if I'd like to be a diver and work with Jim, and I had to say yes. Because, I mean, and that's where basically it started. So I worked with Jim from '82 through 2014 when I retired. And, so, most of my career was with Jim Bohnsack.

SM: So, so your position was.... of a researcher?

DM: At first, I was brought in as a technician, and then after, I think it was about five years, I was made a fisheries research biologist, and that's what I was, fisheries research biologist, for the greater part of my career.

SM: Okay. So when you retired, what was your title when you retired?

DM: Uh, fisheries research biologist.

SM: That was your title.

DM: Right.

SM: Okay. So you worked in total for the, for the Fisheries Science, for, since '77?

DM: It was...

SM: Until 2014 you said?

DM: It was like, 30... 37 years, I believe. Yeah, something like 37 years.

SM: And you were always affiliated with the Miami lab?

DM: Yes. Always. From the beginning.

SM: So, can you tell me, why did you decide to pursue a career in fisheries?

DM: It was, I first, when I graduated from high school I went to work for a place called Gulfarium. Gulfarium is in Fort Walton Beach, Florida, the northwest, up in the panhandle. It's a porpoise type entertainment show; they have diving shows and sea lions. And I worked there on and off for like three years. And the, the manager, Brandy Siebenaler just happened to have been a University of Miami graduate. And him and his wife basically became mentors, I guess, and when I wanted, like when I was going to college and I didn't want to be, go back, and they sort of forced me. I would say that's where I became interested. And then I was a commercial fisherman, and then I finally got my degree in marine biology, or biology, from the University of West Florida, and then I lucked into this job, what could I say, it's like... luck.

SM: I see.

DM: And at that time you didn't need a Ph.D. You didn't need the higher education because everything was beginning; they needed workers. And that's what I am, a field researcher.

SM: During the time that you worked here, can you think back and look back and think, what were the major, maybe turning points, but not necessarily turning points, most important times in the history of fisheries science and fishery management here? From your perspective and your work.

DM: Well, of course, in the beginning in the early '70s when, when the Science Center, it used to be the Bureau of Commercial Fisheries then it became the Southeast Fisheries Science Center, and that's when they brought us all, us, the new stock assessment people like Joe Powers and Ray Carthy, and then they, it was like, just, that was the beginning of this research, and of course the first thing they had to do was see what was there, and that was it. And then the next would be... I don't know. That's the most important, to me, was the beginning, because that's when it all started.

SM: What do you think about the 1976 Magnuson Stevenson Act?

DM: That's what I, that's what it is, that was the beginning...

SM: Can you talk a little bit more about...

DM: I really....

SM: What changed....

DM: Management and policy really wasn't my part of anything. I was part of the group, the research group that tried to get the data to answer the questions that the managers needed to make the decisions.

SM: So what was, did it impact your work, or...

DM: Oh, absolutely, absolutely.

SM: Can you talk a little, yeah.

DM: Politics greatly impacted our work because that's what, as far as I was concerned, because that's what impacted the money flowing into the research, through the grants and the budgets and everything else. But like I said, that was not my, you know, part of anything.

SM: So your work was not directly impacted?

DM: No. I wasn't really in the administration. The only supervisory capacity that I had was as a unit diving supervisor, and the boat supervisor. But money issues, budgets, getting the money, that was, none of that was me, you know.

SM: So before the Stevenson Act, and after, your work had kind of the same pattern.

DM: Yeah it was up and downs...

SM:... The daily work.

DM: It was up and downs

SM: What do you mean by up and down?

DM: Well, it's like, when I first came in, like, we were doing a lot of research and that that was the early '80s and there was money flowing in, I guess you could say. And then there was a time period where there was no money flowing in; I don't know the exact dates. And that impacted us, like that's when I did my stock assessment work, you know? I was working basically for Jerry Ault's group, and Nancy, and, because there was no money for field work. And then, and, you know, I guess in the early '90s it reversed. All the, there was money for research. And that was the last ten years of my career, we had the money for research. Now, I don't think they have the money for research. I don't know. But, yeah, I tried to stay away from that. I was, I was out in the field. I get the data. I figure out how to get the data, you know?

SM: Can you describe a day in your life in that early career, when you were doing field research, and then how that changed, later on?

DM: The field research really started in the '90s for me. I mean, we were doing field research, but it was nothing compared to what we were doing in the latter part of my career.

SM: I would like to know --

DM: It would be like...

SM:--like how it changed.

DM: Yeah, it's, we had like a ten year project, I know Jim talked about it, the last part of the RVC project where we were doing dry Tortugas, the Florida Keys. We came up, you know, papers that were produced on the, and my job part of that was going out in the field, on the boats, coordinating the people, getting the people together, diving, collecting the data, getting it into the system. He was giving it to the managers, like Jim, Jerry Ault, Steve Smith. So my day in those, like getting out here and getting the boat ready, all the divers would get on the boat. We'd travel down to the Keys, launch the boat, go out, spend all day long going to spots. Jumping in the water, counting the fish, and doing that for two or three days, wherever; down in the Keys, up and down the Keys. Towards the end all the way up to Fort, West Palm Beach, actually. And then, of course, you come back, you have to enter the data. And like I said, and then we'd give, and then my part was over, most of it.

SM: So when, uh, so you said you had an early part of your career that you did, you did this kind of data collection in the field, and then there was no money for --

DM: Well it's --

SM: -- for that for a period.

DM: --it's not for, specific, like, research for RVC. But there'd be money coming in for other things in the labs, so you know, you, could get your pay, but like I said, I just went where I was told in those early years. And, but, along with the RVC, of course, we had the side projects always happened. Like I was involved with the aerial surveys with the Coast Guard.

I'd fly up and down the coast with the Coast Guard counting boats, turtles, dolphins; did that like ten years, for ten years. Side projects like into the Caribbean, like Nevis Island, you know. So, there was things always keeping us busy and that's what made the job so interesting, was the, you know, the different things that we were able to do.

SM: I wonder if you could...talk a little bit, if you can make that comparison, what do you think is special or different about the Miami lab, lab, in comparison to the other labs in the southeast, and maybe even nationally? I don't know if you have that... If you can make that comparison, but like maybe, your opinion on that.

DM: The Miami lab, I think, is in a unique position because number one, it is in this total headquarters environment. And so we're in the midst of everything, it just, it filters down, whereas the other labs are more, you know, out in the periphery. But Miami is also unique because it's the center of, like, Caribbean, Gulf of Mexico, Southeast, we're just, and we're just people here are involved in all of that. That to me is what's so unique about this, and plus of course, the University of Miami across the street, you've got the AOML [Atlantic Oceanographic & Meteorological Laboratory] across the street, the whole scientific community in one position, in one place.

SM: Does that lead--

DM: And it's an international community too, because you have that international, I guess you could say, vibe, cooperation, between scientists.

SM: Does that lead to a positive experience, or--

DM: Oh, yeah...

SM: --for research, or--

DM: Exactly, it really does, you get to meet more people here, it just, the opportunities, just the meetings, you know, that you can't do from other labs.

SM: Have you noticed changes in the, um, in the way, in the way that the lab was managed, the Miami lab was managed throughout the years?

DM: Oh absolutely, yeah. In the early days it was, it was, I don't know how to say that...That's, that's, I really don't want to go into that, that could get...[laughter] No.

SM: Well, what about changes in the scientific paradigms and how they've influenced your work?

DM: It was freer back in the early days, I think. The researchers had more control over what they were doing with the money that they got in for grants, whereas over the years, of course, you know, the reduced government syndrome that came in and make it more like a business type environment. I guess the family feel disappeared, that's the main thing.

SM: Interesting.

DM: Yeah.

SM: So there was, like, more of a community type of environment?

DM: It's, I think so, but that has a lot to do with the political environment, I think, about, you know, everybody watching what's going on and, so it's more micromanagement, basically, is what it is, for the researchers.

SM: When do you think that shift was felt more than anything...

DM: Probably in the... it's hard to say. It was just this subtle shift. And all, I think it also got a lot of the risk analysis type of, where the risk assessment was more on the researchers' shoulders to determine what was going to happen, whereas now that decision is, I think, was taken away from the researchers.

SM: Who has the...

DM: Oh, it's farther up, way up the line, whoever, you know. I think. So research has changed; can't do what you could do then, what you could do now.

SM: Can you give me an example?

DM: Diving would be a perfect example. The diving environment has changed considerably over the years. Which is a good thing, because it's safer, you know, of course. But, and, it's just the rules and regulations changing too; more and more rules, more and more regulations.

SM: So what's the...

DM: Airplanes, like the aerial surveys, in the old days you could go up in a private plane and do your research. Now you have to use a NOAA plane. Little things, you know, stuff like that, you just...

SM: Is that problematic, sometimes?

DM: Can't do the, you know. The cost goes up, you know. What you could do for free, you can't do for free anymore. It's, the environment's changed. It's changed a lot.

SM: It sounds like it became more bureaucratic, and a little bit--

DM: Yeah.

SM:--more difficult.

DM: It's more bureaucratic, more oversight, I mean it's all good things of course, but, it just makes the environment completely different.

SM: How, in terms of ability to relate and to this job, did it have an impact in that sense?

DM: No, not for me, you know, I just... We were always able to adapt to keep diving. That's what it was all about.

SM: Do you still dive?

DM: No, I have medical issues forced me to stay out of the water now, I guess you could say. I miss it. Always will. Jumping off a boat, saying to yourself, nobody has ever been here before. It's kind of cool.

SM: What's the most exciting experience, diving experience, you've had while working here?

DM: Gosh, there are so many of them, there's...

SM: Yeah. Tell me about it.

DM: Well, there's exciting in the sense of discovery, that's one exciting, then there's also exciting in the sense of danger; what happened, you know. I mean, you know, discovery, I mean it's like, seeing the, uh, the spawning aggregations in the dry Tortugas, or the grouper aggregations off of, you know, off here in the Keys. Watching the decline of the sea urchins in the '80s, or the coral die off, those are all exciting; they're disasters but it's still exciting. Luckily, nobody ever got hurt on my watch, you know, as the unit diving supervisor, but there's always that sense of danger when you're diving, you know, what could happen, I guess.

SM: What's the most difficult thing about being a diving supervisor? How many people do you supervise on one trip?

DM: It could be up to twenty, thirty--

SM: Wow.

DM:--people. But, uh, you know, it's usually like four or five people. But the unit diving supervisor for the laboratory, there's more paperwork, trying to keep up with all the regulations and the tests, and the yearly, administration work, I guess you could say. The dive, the dive master, (I've got to get something to drink, my mouth is getting all dry. I'm going to go get a drink of water.)

SM: Sure, please.

DM: All right, where were we?

SM: So we were talking about supervising divers and what was, what were some of the great things, and what were some of the tough things about being a supervisor.

DM: The tough thing about being a supervisor is being responsible for the people, or as a dive master, is more in the field, the unit diving supervisor is more an office job. The dive master is the person in charge of the, the trip, as divers. Now the dive master being responsible for all those people, at the end of the trip, it's a relief; it's over, the trip's over. You got it done. That's, to me that was a big rush, to have got the work done, safely. That'd be about it, really.

SM: What about, what are some of the dangers of --

DM: Oh, dive...

SM:--doing this kind of research and collecting data.

DM: Well, diving is inherently, you know, dangerous. I mean, you're breathing a gas under, compressed gas, under anywhere down to 130 feet as a NOAA diver. Mostly, you know, thirty to sixty feet, I guess you could say, but it's inherently dangerous, so the training, you have to have that training. You have to be constantly aware, situation awareness, you just have to know what's going on. When you jump off of a boat, there's just, there's dangers in the water, you know, the, underwater, you know, creatures, coral cuts, anything, there's all kinds of dangers like that. But training, you know, and risk analysis, you overcome those. But the excitement, you know, the adrenaline rush, the, diving is just, to me, it's just awesome. And to be able to do that and, you know, collect data for research, is a plus, it's a tool. So that's, being able to dive and, to get that data, you know, that was, to me, the best part--

SM: What was one of the--

DM:--of being a diver.

SM:--scariest moments in one of these expeditions?

DM: I guess the scariest moment is if you come up without a partner, or when you don't know where the boat is; that's scary.

SM: Did that happen?

DM: Oh, it, it happens. You know, if you dive enough, it will happen. But that's why you have people on the boat looking for you. And, you know, it's always nerve-wracking when a shark, you know, approaches, but... Or a barracuda, or a Moray eel, you know. Current, you know, current and visibility, you know, black out condition, you know. So it takes a special person to be a diver; takes a special person to be able to do research and dive, and not all people could do that.

SM: From the, from the divers in your, so you had, you had divers who have been in your team for a long time?

DM: Oh, yeah, yeah. I mean...

SM: Most of, like how, what was the percentage of, working with the same divers throughout...

DM: Well, you really get to know people, you know how they react. But that's good because you want somebody, you want to know how somebody, you know, so like Jim Bohnsack and Jack Javitz, Doug Harper, you know, we dove together for thirty years, twenty years, twenty-five years, so. But it was always nice seeing the new divers come in. That was another thing that was really great about the project, was because we had the University of Miami students, the contractors, the young people. And watching their reactions, that was always cool. Plus it kept me young, too.

SM: Have you kept, like, relationships outside of work?

DM: Oh yeah, oh absolutely. It's, you know, when you dive with somebody long enough and you spend all that time on trips and, because we did a lot of traveling, you know, you become friends and get to know people. So that's another thing about the diving community, it is a community. It is a family, I guess you could say. It's a small part of the whole NOAA, very small part.

SM: What's the average length of an expedition like that?

DM: Uh, it can, we spent up to ten days on the spree and the dry Tortugas, for example, at a time. I actually, I spent twenty days one time. So that was about the longest. Most of them are like three days. But most of them, it was like the Keys trips and stuff, but you know you come in at night, or the Virgin Islands, you come in at night so it could last two weeks. But then you could do that two or three times a year. And in that time you just try to get all the data you can, because crunch time is later, you know, that's what the winter's for. Put the data together.

SM: What do you miss the most about these expeditions?

DM: The comradeship, I guess, you know, the diving, the discovery, you know, getting it done. And just, like I said, every dive is different.

SM: Were there any women divers?

DM: Oh, oh, absolutely.

SM: Yes?

DM: Absolutely.

SM: Was there, like...

DM: I mean, I'd say like fifty percent of our divers are...

SM: Really?

DM: Yeah, there's no, it's...

SM: From the beginning of your career, or?

DM: No, not at the beginning of the career, it's, at the beginning it was mainly male because that's all the marine biologists there were. But over the years of course, you know, more and more. I can't remember what the exact percentage... It's, I've seen trips where there's fifty percent female, fifty percent male; no difference to me, it's everybody's... underwater you're all the same.

SM: So there was no difference in working with...

DM: Oh, no, no, no; there's no difference. No difference at all.

SM: Is, uh, has that percentage changed over the years, I mean the recent years...

DM: Uh, no. I think towards the end it was like I said, close to fifty/fifty male female.

SM: I don't know if you, if this had an impact on you, but I guess, late '80s, '90s, the advent of computer modeling and all these IT technologies; how did that impact you?

DM: Oh, God. In the, just on the boat, for example, the technology changed from going out and using triangulation to find a spot, like here's a spot, you have a tower here, a tree here, you try to line those two up, you have the tree here, the power... in other words, all, that's how you did it, by visual sight. Or, then they came out with the LORAN [Long Range Navigation], LORAN A, B, and C, which was, which was really difficult. When they came out with the GPS [Global Positioning System] in the '90s, I believe it was, after the Desert Storm, you know, '92 or something like that, we were able to use GPS; that was, without that and the fathometers and the depth finders, research, we couldn't have done our job. We couldn't have found the spots we were told to go to. Because it was the computer and the statisticians, I guess you could, the mathematicians, that told, that picked the spots to tell us where to go. So we had these tools on our boat towards the end and then the computers, watching it go from data card readers to punch cards to tapes and gosh. Jim Bohnsack, I believe, was the first person I ever saw with a laptop and a floppy disk [laughter] and that was in, what, the '80s. And from then on it was just... of course, the computer revolution. And without that, those tools, we couldn't have done the job we do. And that was one of the main regrets, was, about retiring, was not being able to keep up with these new tools for research, I guess. And see...

SM: So what was the, kind of, in terms of data collection and quality and all of that, can you give me an example from the time before the advent of the GPS, for example, and computer modeling capacity, you know, from before that to when these tools became really available and easy to use? What do you think was...

DM: Well, speed of analysis...

SM: The speed of analysis.

DM: And the amount of data that could be crunched. Of course the amount of data just, you know, trying to, watching people do analysis with slide rules and handheld calculators, gosh, that's what it was when I first started. And like I said, punch cards, to now, you know, everybody has a laptop with more computing ability, well and more computer ability on your telephone than they did in the whole computer system here in 1980, or '85, I guess, when I first started here. Modeling, you couldn't, modeling couldn't, wasn't done. Just didn't have the tools. Gosh, just the graphic, graphic, you know, watching illustrators with tape and, you know, drawing, and dots, you know, and now it's all, you know, happens, you know, we had secretaries back then typing up your papers and artists doing your drafts and everything; now it's, everything's done by one person on that one computer. It's just amazing.

SM: What do you think is the future of fisheries science? How do you think it's going to change from now?

DM: I think there's going to be more management. I believe there has to be. There's more people wanting the same resources, basically is what it's all about. I think, personally I think

it's, when I first started it was like a lot of Indians and very few chiefs. Now the Indians, I think, are the contractors, the interns, the college students, and then you have a, you know, the Ph.D. in charge of the program. That's the difference, I think, one of the main differences I see.

SM: You mentioned, you talked a little bit about that, maybe can you talk a little bit more about the positives and negatives of working for a government agency.

DM: Well the positives outweigh the negatives. I mean, the pension that I was able to receive, the medical, you know, the job stability, all that. I don't know, the worst part I guess would be the negative impact that the public has on the government, you know, agencies. You know, spending tax dollars and all that kind of stuff. I mean...

SM: What do you think is lost, why do you think there is a negative opinion from the public side on the research that the center does?

DM: Education, I believe, needs to be improved. As a recreational fisherman now, trying to keep up with rules and regulations is very difficult and I know where to look. Education, so, education, you know, educating the public, that's, enforcement of the rules. That has to be improved. What I'm seeing as a recreational fisherman now, most people obey the rules, self-enforcement, whereas in the past it wasn't. But there still needs to be more education.

SM: Who do you think should provide that, that type of education?

DM: That's a good question. Television. Internet, I guess. I mean, if you know where to go you can find it, you know, but. Most people don't like the rules. They don't like to be told what they can do. I don't know how to answer that. That's a really good one. Who made up all these questions?

SM: Have you noticed changes during the years in advantages and disadvantages in working for the government? Was it different when you started working as opposed to...

DM: It's harder to get into the government because there's less jobs, but the pension system has changed, of course. It went from CSRS to FERS. But the advantages, to me, outweigh... Not everybody could work for the government. Some people just, you know, couldn't do it.

SM: Why?

DM: A lot of rules you have to follow, a lot of things you have to do. They have nothing to do with what you, you know, but. But working here has a special advantage too, I mean, look out the window. God, when I first started working here there might have been thirty people in this whole building. Over a hundred now, you know. Everybody, you know, it's just.

SM: What do you feel most proud of in your career here?

DM: Being part of the RVC program and watching it develop and being accepted by other parts of the country as their method, you know, fish counting.

SM: Can you describe a little bit, this program? For people who are not familiar with it.

DM: The Reefish Visual Census program, gosh I haven't even really thought about, it's been so long, two and a half years.

SM: When did that program start?

DM: When Jim Bohnsack came in in 1983, that's basically when our, the program started with the Key project. For two years we went down there and counted fish and got some reports out. The big change came in, when was it, the late '90s when the University of Miami and Jerry all came aboard with his modeling experience and putting together the protocol that came about which is, which is going on now. I think, and seeing it evolve and being accepted as a tool like it has been, that's, I guess, a good achievement.

SM: What's, um, what's the protocol, more or less?

DM: It's all based on getting to the bottom, jumping in the water, going to the bottom and imaginary circle and you're counting all the fish in this circle, in a fixed time period, five minutes. And you have four, two pairs of divers so they average the two divers and, and, it's the numbers that we, you know, thousands and thousands of fish counts over the years, which enables them to do stock, use this data for stock assessments of certain species of fish like snappers and groupers. To me, it's all based on a fishing trip where you drop a line, a hook and a line in the water. It gives you effort. You come up with nothing, same thing as a fish count. You don't see anything. You come up with a grouper, it's like a fish count where you see one grouper. And they take this data and it's exciting to see when you compare the underwater fish counting data, which is, you aren't harming anything, versus the commercial fishery data which they get which is based on the catch. The curves, the graphs, show the same thing up and down, ups and downs. It's amazing. So that's one advantage right there with the RVC program, you could do fish counts and get information from areas that you can't fish like preserves.

SM: Is this protocol still in place today?

DM: Yes, yes it's, it's still going on every year, every two years now, I believe, it's, they do the Florida Keys, this center, and in Puerto Rico, and the other year they do the Virgin Islands, so it's been expanded to the Caribbean. And I believe they also use the program in the Hawaiian islands.

SM: Did you, what were the trends that you noticed, in terms of fish populations throughout the years.

DM: Oh, of course they've gone down.

SM: They've gone down.

DM: Gone down considerably, actually. Except in the reserves, and a lot of the reserves, protected areas, they could actually detect the positive increases. But that gets into a whole other marine reserve type of thing. I imagine Jim talked a lot about that.

SM: Is there anything else you would like to add to this interview, something we didn't talk about, something you would like to talk about that's related to the, related to the history of working for the Southeast Fisheries Science Centers?

DM: I am just glad to have been a part of it, you know. And seeing the positive changes come about, you know, to me that's been, that's been it.

SM: Positive, you just said that the fish stocks went down...

DM: Oh, yeah, yeah,...

SM: What, what do you mean?

DM: Of course the number of fish out there are nowhere near what they used to be, but certain species such as red snapper have been managed for the last what, twenty years? Thirty years? And king mackerel is another example, in the Gulf of Mexico, where you can actually go out and catch them now where at one time they were severely depleted and you couldn't go catch them. There's numerous examples, you know, on that. But, overall, no, it's, everything's declined. Which could be a lot of it, you know, numerous reasons too.

SM: Well, I would like to thank you for this interview. It was a pleasure to talk to you, and please let me know if there's anything you would like to add, anytime.

DM: You're welcome.