

SSD: All right. Now it looks like it's picking up. This is an interview for the Maritime and Seafood Industry Museum and the University of Southern Mississippi. The interview is with Ms. Sally Murphy. Is it Dr. Murphy?

SM: No.

SSD: It is taking place on April 1, 2010, at nine AM in Hattiesburg, Mississippi, on my end and in South Carolina on Ms. Murphy's end. I am the interviewer, Stephanie Scull-DeArme. First, I'd like to thank you, Ms. Murphy, for taking time to talk with me today, and I'd like to get some background information about you, which is what we usually do in our oral history interviews. So, I'm going to ask you, for the record, could you state your name, please?

SM: Sally Murphy. S-A-L-L-Y.

SSD: I'm sorry. I was talking over you. For the record, how do you spell your name?

SM: S-A-L-L-Y-M-U-R-P-H-Y.

SSD: Thank you. When were you born?

SM: October 16, 1943.

SSD: Where were you born?

SM: In Savannah, Georgia.

SSD: What is your current position?

SM: I'm retired at this time. I was formerly the sea turtle coordinator for the South Carolina Department of Natural Resources.

SSD: Can you just give us a small description of what you did in that position?

SM: I sort of established the program. The program consisted of research to determine what things were impacting sea turtles on the South Carolina coast, management to implement things to help recover sea turtle species, monitoring the population to determine if it was improving or still declining, and then education and outreach to the public in general.

SSD: Well, let's dive right into the questions that we want to address for the museum, and I'll start with number one. What role did you play in introducing TEDs to the shrimping industry?

SM: In 1979, just as I started my career, I was appointed as co-leader of the first marine turtle recovery team. Peter Pritchard, who was a noted turtle expert, was also co-leader. And so, we were immediately thrust into the role of trying to get TEDs implemented. At the time, there were no TEDs even being talked about, but by 1980, there was an important meeting in Charleston after that sea turtle season, and there had been – gosh, we had over six hundred dead

turtles documented on South Carolina coast, and there were over eight hundred on the Georgia coast. So it was clear that we had a huge problem.

SSD: Wow. Did they just wash up on shore?

SM: Yes. Washed up dead.

SSD: So, how did your work actually get the TEDs on board boats? Can you give us a little idea of how information and enforcement trickled down?

SM: Well, in 1986, South Carolina was hosting the annual sea turtle workshop, and we were having it down in Georgia because we had sort of outgrown the facilities up here. One of the Georgia sea turtle people had Sinkey Boone, who developed the Georgia jumper TED [turtle excluder device], come set it up at the sea turtle workshop. He actually took his net and had ropes and strung it from the oak trees to let people see what it would look like if it was deployed underwater. Up until this time, the only TEDs we had seen were the National Marine Fisheries Service [NMFS] TED, which was a big square box. But Sinkey Boone's TED was just a flat, two-dimensional, oval grid with parallel bars, and we looked at that and went, hmm, I think this is the answer. So Sinkey gave me a TED that I brought back to South Carolina, and I showed it to the shrimpers' association people. I also just carried it around in the back of my station wagon and would stop by the docks and show it to the shrimpers.

SSD: What was their reaction?

SM: Well, when you go down to the dock and start talking to them, they would just go berserk and scream and yell and carry on for about fifteen minutes, just getting it off their chest, because none of them liked that NMFS TED, which was, you know, the big, heavy box. And I couldn't blame them. I don't think I'd want that swinging over the deck of my boat, either. But then, once they calmed down, they really liked the Georgia Jumper, and they would say, "Oh, leave me that one. I'd like that one." I said, "No. This one's mine; you have to get your own." [laughter]

SSD: Wow, that's interesting. I can just see Sinkey Boone setting that TED up in the oak trees. Did he set up the whole trawl net?

SM: Yes. The whole net and everything.

SSD: Wow. About how big do you think it was?

SM: Well, the grid itself is only maybe four feet tall and maybe three feet wide. But the net was probably a forty-foot net.

SSD: Wow. I wonder if there are any photographs of that.

SM: I don't think so, but it's sort of legend in the sea turtle community. It did exclude three inebriated PhDs in the middle of the night.

SSD: [laughter] Did they get tangled up?

SM: They tried to crawl through the thing.

SSD: I wish we had a video of that. [laughter] Oh, that's great. Well, is there anything else you'd want to add to the first question about your role in introducing TEDs?

SM: That's pretty much for the old days, yes.

SSD: Number two, how were TEDs viewed in the early days?

SM: Like I said, the shrimpers were very adamantly opposed to the large NMFS TED. It was heavy and bulky, and they perceived it as dangerous, and when they brought it up to Charleston for a demonstration, the first TED had – the NMFS TEDs had like a bungee cord on either side that helped keep the trapdoor closed, I think. On the very first tow for the shrimpers to see how this TED worked, they brought it up, and an adult female loggerhead was caught in the bungee cord and killed and drowned. So after that, they kept saying the TED stood for turtle execution device.

SSD: Wow. Amazing. That was pretty disappointing, I should think, to the developers of the TED. They were probably thinking, what do we do now?

SM: Well, that's why I think they were much more amenable to using the Georgia Jumper and the other design that was very similar to the Georgia Jumper is the Super Shooter, which is just like the Georgia Jumper, except when you get down to the lower end of the parallel bars, they angle in more acutely and so I guess the steeper angle just shoots the turtles out the trapdoor, out the exit.

SSD: Do you know about how long it was – just a ballpark figure – from that first tow with the big box-like configuration from NMFS to Sinkey Boone bringing the Georgia Jumper to that meeting?

SM: I would say just a couple of years, maybe a year or two. Not very long.

SSD: How long would you think it took from that meeting to actually getting those TEDs into shrimp nets?

SM: It depends on where and when, because once I saw that this Georgia Jumper would work and that they were sort of leaning to accepting it, I thought, "There are no more excuses for not doing this." Also, in monitoring our turtle population up here, I had seen our loggerhead nesting population decline by twenty-five percent in five years, and that was scary. So, in 1988, the South Carolina Wildlife Commission passed state regulations requiring TEDs. So it was just two years from the time we saw the Sinkey Boone TED in Georgia until South Carolina required them. Of course, they still were not required by the federal government yet.

SSD: In federal waters, right?

SM: Right. They were just required in state waters.

SSD: So, for the record, what are the state waters and the federal waters in South Carolina?

SM: State waters are from three miles off the beaches inland to – including all of the sounds and bays.

SSD: And then anything out – three miles out –

SM: Anything beyond three miles is federal.

SSD: That's a lot of shrimping federally if you're trying to save turtles, and there's no federal requirement. That's a lot of turtles, isn't it?

SM: Well, most of our boats fish fairly close to shore, within about five miles of shore.

SSD: Now, at that time, though, were there like Japanese out there in the –

SM: No.

SSD: No. Okay.

SM: That's another thing that we might want to put in here is that our shrimping fleet is, I think, very different from the fleet in the Gulf of Mexico.

SSD: How's that?

SM: These are all family-owned boats, and when they fish, they like to come back into port in the afternoon, and then they go out early the next morning. But I think in the Gulf, as I've heard, the boats are – you might have several boats owned by the same owner that are leased out to other people, and then they go out, and they stay out for days or weeks at a time. So it's quite different.

SSD: That's the anecdotal report I'm getting from shrimpers. Some of the shrimpers in the Gulf of Mexico are still – they still want to be in-shore. They don't want to go too far out, and they tend to just be day shrimpers and come back in.

SM: Right.

SSD: But there are others who will go out for weeks and months.

SM: Well, some of the Gulf boats were coming around here to fish in the southeast, and our shrimpers petitioned the department and the legislature to eliminate night trawling so that way they could go home and the out-of-state boats would not be in competition with them trawling at

night. So that was one of the reasons they did it, to make it less profitable for out-of-state boats to come here.

SSD: So, at that point, it would level the playing field that everybody was trawling during the daytime.

SM: Right.

SSD: Do you think that there was a danger of over-fishing the shrimp population off the South Carolina coast?

SM: No. I don't think it's that. It's an annual crop, and it's renewed every year, so they harvest as much as they can. I think it was just a matter of how many pieces of pie you're cutting up from one pie, which is the shrimp crop.

SSD: I see. Is there anything else about how the TEDs were viewed in the early days that you'd like to add?

SM: That's about it.

SSD: Then, do you have an idea of how TEDs are viewed today by the shrimping industry?

SM: I know our South Carolina shrimpers consider them now a necessary and valuable piece of equipment on their boat. Most of them would use them even if they were not mandated now.

SSD: Wow. Why is that?

SM: Well, they do a lot of things. They not only eliminate turtles but they get rid of a lot of trash that gets into the nets – tires and buckets and things like that, that they pick up on the bottom. They get rid of a lot of large fish that also get in the nets. When these things get down in the bag of a net, they mash the shrimp and break the shrimp. So they have a cleaner catch. It takes less time to sort it, and they also get a higher-quality catch when the shrimp aren't all mashed up.

SSD: Just for the record, could you define what sorting is on a shrimp boat?

SM: Well, when they bring the bag on board and dump it on deck, you have shrimp, plus you have a lot of other organisms that have been caught in the process of towing. And since all they want is the shrimp, they have to sit there and sort and pick out the shrimp from the other things and then sweep the other organisms overboard, which is mostly the bycatch.

SSD: So what they're sorting out from shrimp is considered bycatch.

SM: Right.

SSD: So that's interesting that today, actually, all these years later, they're seeing TEDs as actually being helpful to them.

SM: Oh, yes.

SSD: Yes. I actually have heard that from one shrimper in Mississippi, and it's really good news, actually – good news for turtles. Let's move to number four, then. What were the challenges faced in developing TEDs?

SM: Well, the Georgia Jumper that Sinkey developed – he'd been using that for years to get rid of these big cannonball jellyfish that show up in the spring. In fact, he told me he would keep it a secret from the other shrimpers because, with that in his net, he was able to shrimp in the spring, whereas the other boats would try to tow, and their nets would fill up with jelly balls, you know, in fifteen minutes.

SSD: So he was protective of his intellectual property.

SM: Yeah. And, of course, laughing all the way to the bank, you know. [laughter]

SSD: Right. Yeah.

SM: But the challenge was to make the TEDs that were – a lot of people, once they saw the Georgia Jumper, they started copying it in different styles. But a lot of them were made out of material that was too light or too flimsy or not supportive, and so the thing would just collapse when they tried to tow it. And then that would give TEDs a bad name. Oh, my God, I don't want to use this thing. It collapsed. Well, it wasn't made properly.

SSD: Right.

SM: Sinkey's worked well, and, like I said, the Super Shooter worked well. Then the other thing was making sure – one of the TEDs that the shrimpers developed, and it was a fellow up here in South Carolina, Sonny Morrison – he developed what was called a soft TED. This was just a piece of netting instead of a rigid grid that was sown into the net, but that one clogged badly, and so, again, you get them saying, oh, no, this TED doesn't work. We can't use it.

SSD: Does clogging keep the shrimp from coming into the net?

SM: Well, it's ironic. The very first year that they required TEDs, we also had this weird red algae that showed up in the water, so you had this flimsy little stringy kind of algae, and it was hanging on every single thread of that piece of mesh that was sewn in. So that's what was clogging so badly. Some shrimpers just said the design was silly. They said, "Why would you put a gill net inside of a shrimp net?"

SSD: [laughter] For the record, can you define gill net?

SM: Well, it's a stationary net that's anchored in place, and the mesh are a certain size, depending upon which fish you're trying to catch. As the fish try to swim through the net, they go through the openings, and then their gills get hung up, and they can't back out or swim away. These are also bad for turtles.

SSD: I should think they would be. Right.

SM: Another problem in developing the TEDs was the National Marine Fisheries Service just would not give up on that design that nobody liked.

SSD: The first big boxy one?

SM: The first big boxy one. Now, they tried to make it lighter, and they made one that was collapsible, but instead of just saying, "Wow, look at these ones the shrimpers have, aren't they better," and then going forward with those, they kept trying to get shrimpers to use these big, boxy NMFS TEDs. I think that sort of kept the antagonism going between the shrimpers and the federal government.

SSD: Got in the way of compliance.

SM: Right.

SSD: Any idea why NMFS was so stubborn about that?

SM: Arrogance. Just wouldn't admit that they had a design nobody in their right mind would use.

SSD: So how and why did that change?

SM: Well, they even gave their TEDs away. They gave away, I think, four hundred free of charge to shrimpers for them to use and try, and they didn't try them. They just stayed there on the docks, and they took some of the floats off and used them. I mean, they dismantled the federal TEDs and used what parts of it that they could. The things just sat there at the docks. There were weeds growing up between them.

SSD: Wow. So when did NMFS start to look at, say, the Georgia Jumper and the Super Shooter and say, "We better try these?"

SM: Well, they went to the certification program where they wanted to make sure that the TEDs would exclude turtles like they were designed to do and not really affect the shrimp catch that much. So they started down in the Canaveral ship channel, testing and certifying these TEDs where they would pull like one of the Georgia Jumpers in one net and on the opposite side of the boat, they would pull either a naked net, with no TED in it, or they would pull it against one of their own big boxy TEDs. Now, the boxy TEDs would get rid of turtles, but the shrimpers just didn't like them.

SSD: What did they do in terms of the shrimp catch? Do you know?

SM: The – some of the TEDs that were later rejected had pretty high shrimp losses, and this is another thing that I think was misrepresented to the shrimpers was the amount of shrimp loss. They kept saying, oh, these things make us lose shrimp. Well, some of the ones that weren't designed well or weren't installed properly probably did make them lose shrimp. But when you consider – see, when a shrimp net opens, it has two doors on the front that pull against the water pressure and open up the mouth of the net.

SSD: Of the trawl?

SM: Of the trawl, right. It's kind of like when you're trying to waterski; if you don't have your skis straight ahead, it'll pull your legs apart. The weight of the bag is what eventually pulls those doors back together, and that's when they pull it up and empty the bag when it's no longer fishing efficiently. So with less bycatch and junk in the bag, the mouth of the net actually stays open longer. So you're catching more shrimp per tow, I guess because you can tow longer without all that garbage in the net closing down the mouth of the trawl.

SSD: Right. So it's an advantage in that way.

SM: Right. So some of the TEDs were certified, and some were not. Like I said, some were just flimsy and not sturdy enough.

SSD: So what was the practical application of it not being certified? Those were just dropped – left aside?

SM: Yes. Right.

SSD: And so did the boxy TEDs – is that how the boxy TED met its death?

SM: No. I think it was the fact that the shrimpers just weren't using them, weren't buying them.

SSD: okay.

SM: But in the meantime, NMFS spent \$4.5 million developing a TED that nobody wanted.

SSD: Yeah. So it was kind of trial and error, and that trial turned out to be the error.

SM: Right. But, like I said, in the meantime, it sort of put the image of what a TED is in the minds of the shrimpers as that big, bulky thing. Because the minute they heard the word TED, they'd go berserk.

SSD: Right. Is there anything else you can think of as a challenge that you'd like to put on the record?



SM: Well, in the Gulf of Mexico, the shrimpers were represented by Tee John Mialjevich. Has this name come up?

SSD: Yes.

SM: So he was a real agitator, a rabble-rouser, and I don't think he really gave them the leadership they needed to get on with the program and do this. He just resisted it at every turn.

SSD: So he, himself, was a challenge.

SM: Say again?

SSD: So he, himself, was a challenge, too.

SM: Yes.

SSD: Developing –

SM: He was a challenge. [laughter]

SSD: Yeah. His name has come up, and I don't think I've heard anything positive about him from anybody, including shrimpers.

SM: Yes. I was on a committee way back when they were trying to get shrimpers to voluntarily use the TEDs. It was a committee made up of some of the people from the recovery team, some of the people from the Center for Marine Conservation, and shrimpers. After much negotiation, where they were going to sign this agreement, that they would agree to try to implement TEDs voluntarily, he just, at the eleventh hour, just said, "No, I'm not signing it." So he just went back on his word.

SSD: Wow.

SM: I think he fueled the protests that happened over in the Gulf with the blockade of the Houston shipping channel.

SSD: Right. I guess, for the record, we could talk a little bit about that blockade. What do you remember about it?

SM: Not much. I remember seeing photographs of it, which were pretty impressive, but I think a lot of the violence toward the Coast Guard was also present at the time. People [were] throwing things at Coast Guard boats when they tried to stop and board them to check for TEDs.

SSD: How did the Coast Guard react to that?

SM: Well, I don't really know. I wasn't there. But it was not pleasant times.

SSD: Right. It seems like getting close to assault on an officer.

SM: Right. Right.

SSD: Which could get you in big trouble.

SM: Right.

SSD: Number five we've touched on – what were the challenges facing getting the shrimping industry to use TEDs? Is there anything you'd like to add to that?

SM: No, I think we've covered it pretty well.

SSD: All right. We've talked about number six some, also – that the early TEDs were the big, boxy thing, and is there anything else you'd like to add to how the early TED models compared to later models?

SM: Well, like I said, the Georgia Jumper and the Super Shooter haven't changed at all since they were first developed. I mean, they were fine like they were. SO it was just a matter of the shrimpers learning that these two TEDs were the best and not using any of the others anymore, once they figured this out. So there really weren't different models of the Georgia Jumper and the Super Shooter. About the only thing I can say that changed is that the spacing between the bars – NMFS required it to be no wider than four inches.

SSD: And that's in a grid?

SM: Yes, but between each of the parallel bars – the space between them could be no larger than four inches. And a lot of the – Sinkey started making Georgia Jumpers that the spacing was like two inches. So that gave them an even cleaner catch.

SSD: Wow. So even that close together, shrimp were getting in.

SM: Oh, yes.

SSD: Interesting. Anything else about TED models?

SM: No. I think that covers it.

SSD: All right. Do you have any personal experience with protests against TED regulations?

SM: Oh, indeed.

SSD: Tell me about those.

SM: Well, I was sort of the lightning rod for this whole thing since I was with the DNR and I was the turtle lady, although "lady" wasn't the term generally used. [laughter] So at public

hearings and things like that, I would be yelled at and cursed, and in the shrimpers' newsletter, my science was questioned. At one of their meetings, where I wasn't there, but someone told me they hung me in effigy. I would get phone calls – anonymous phone calls – threatening to sue me because of their economic ruin.

SSD: Do you think that was a reasonable description of what was really happening? Were they going into economic ruin?

SM: No. They were fine. When the South Carolina TED regulations went into effect in 1988, the shrimpers' association challenged them in court, and the courts would rule in favor of the department, and then they would challenge them at a higher court. Then that court would rule in the favor of the department. So during 1988, the regulations were essentially either in effect for about two weeks, and then curtailed for two weeks, and then back in effect.

SSD: While the litigations were being decided?

SM: While the litigation was going on. I had to testify in court, and the judge asked me – he said, “Do you believe these shrimpers are having a hard time using these TEDs?” And I said, “Yes, judge, because they're using the wrong TEDs.” They jeered and carried on in court.

SSD: Wow.

SM: A lot of them were trying that soft TED, which didn't work.

SSD: Right. Did you ever feel afraid for your life during that time?

SM: I checked my rear-view mirror when I was traveling quite a lot. In fact, even later on, much later on, when the National Marine Fisheries Service was trying to enlarge the openings of the TEDs – this was in the early 2000s – it was a federal hearing on a federal regulation, but it was just taking place in our DNR [Department of Natural Resources' auditorium and I was still cursed and shouted at like I was the problem.

SSD: Wow.

SM: Some of my nest protection volunteers had come to see it, and they did come up to me afterward and say, do you have a gun? Can I walk you to your car? [laughter]

SSD: Wow. It sounds like an uncomfortable position.

SM: I got so used to it I would just tune them out.

SSD: Really?

SM: Yes.

SSD: Well, that speaks for your strong character, I think.

SM: Well, they were going to do it – they could either like it or not, but I was not giving up until they started pulling these things.

SSD: Sure.

SM: And stopped killing turtles.

SSD: Right. Can you tell me a little bit about the – wait, let's see – did you call them turtle nest volunteers?

SM: Yes.

SSD: Just for the record, and I don't know either – who are they? And what do they do?

SM: Well, like I said, in the very beginning, when we realized how many dead turtles were washing ashore, one of the first things the recovery team decided was a necessary component was to have a stranding network to actually document this in a very standardized way. Because in a lot of the states, you didn't have complete coverage, and people were using different data forms, and so it was just a hodgepodge. So the state set about getting people to make sure beaches were covered almost on a daily basis and to measure and record data on the dead turtles washing ashore. So we recruited a lot of volunteers. They might have been members of Audubon groups or Sierra Clubs or even on beaches that were part of the National Wildlife Refuge system, our own state-owned beaches – that sort of thing. So we eventually grew a network of mostly volunteers to help with the strandings. But as these folks were walking the beaches each morning, they noticed that a lot of the nests were getting raided by raccoons and things like that or over-washed. So they said, "As long as we're out here every day, we might as well start protecting these nests." So each beach – now in South Carolina, there are twenty-one separate little groups of folks for each island. There's usually a project leader, and then there might be as many as a hundred people that volunteer in the summer, just on one island.

SSD: Wow.

SM: I mean, they'll sometimes have three times more volunteers than they have nests. It's just grown over the years, and there's now over eight hundred volunteers in South Carolina.

SSD: That's fabulous.

SM: And they'll walk the beach and find the nests, and they can place predator screens over them, or if the nest is maybe in a place on a developed beach where people might be walking on [inaudible] or if it's in an area that might be eroded or flooded, they'll also move it to a safer site. Then, in two months, when it's hatched, they go in and inventory how many eggs actually hatched and how many hatchlings made it to sea. So it's a huge, huge help to the department who could never do any of this with just three employees on turtles.

SSD: Right. Unless we stop sending people to war and hire them to do important work like ecological work.

SM: Right.

SSD: Well, there are a couple of things that you mentioned that I'd like to get defined for the record. One is strandings. What is the definition of a stranding?

SM: A stranding is any animal that washes ashore. It could be dead or alive, sick or injured.

SSD: What would they do if they found a sick or injured turtle?

SM: Well, back before 2000, we didn't have any facilities here in South Carolina, so we would have to transport the turtles either all the way down to St. Augustine to Marineland or all the way up to North Carolina to Topsail Beach, where they have a sea turtle hospital there. And it was, you know, a long, hard journey, and the turtles frequently died en route. But in 2000, Charleston got the South Carolina Aquarium built, and so now we have a sea turtle hospital there right in Charleston, so it's centered on the coast, and any turtle that comes up sick or injured can go straight to the aquarium in Charleston.

SSD: You said that sometimes the nests were over-washed. What does that mean?

SM: Well, a real high tide would come in, and the tide would cover the nest, or in erosional areas, where the dunes are like getting eaten away by the tides – if a turtle nested at the base of that dune, you knew the next high tide it would be flooded and drowned.

SSD: So the eggs would just float out with the outgoing tide?

SM: No, the eggs are a foot and a half below the surface, but they would be deprived of oxygen when the water was around them, so it would kill the embryos.

SSD: So the eggs have to have oxygen.

SM: Oh, yes.

SSD: Interesting. I actually didn't realize that. I guess I was thinking about the human uterus and the amniotic sac, and that's all fluid, but that's not how it works for turtles.

SM: No. Reptiles and birds have eggs that have shells on them, and air and oxygen tend to fuse through that shell, and there's air between the sand grains. So when they're down in the nest, they're getting oxygen through the eggshells. But when water surrounds it, then they're not getting any oxygen.

SSD: Are you hearing static on this line?

SM: Yes. It may be my phone, so just don't worry about it unless it's messing with your recording.

SSD: I'm really worried about the quality of the recording. I wonder if I should try to call you back and get a better connection.

SM: I don't know. I know when I talk to my son on weekends, he complains about the static.

SSD: Well, I just don't know what to do about it. Do you mind if I do try to give you a call back, and maybe we'll get a better connection?

SM: okay. That'll be fine.

SSD: All right. Give me just a minute to call you back after we hang up.

SM: okay.

SSD: Thanks.

SM: Bye.

SSD: Bye.

SM: Hello?

SSD: Hello. Well, I guess this is, I guess, the most we can do to try to get rid of the static.

SM: okay. It sounds better.

SSD: Yes, it does. I'm glad we tried it. So we were talking about protests against TED regulations, and you were the lightning rod and the turtle lady – public hearings, people venting, and you were the target of negative press in the shrimper's newsletter. You were hung in effigy. You got phone calls saying that you were going to be sued because of shrimpers' economic ruin. Does anything else come to mind when you think about protests against TED regulations?

SM: That about does it. [laughter]

SSD: okay. [laughter] Number eight. Have you ever been involved in enforcing compliance regarding the use of TEDs?

SM: No. I was not in law enforcement.

SSD: Number nine. Do you know how compliance regarding the use of TEDs has changed over the years?

SM: I think we had pretty good compliance here in South Carolina once they realized that, you know, they could use the things. Our DNR marine patrol officers used to go out and actually board boats and check on their TEDs, and so would the Coast Guard. I think the shrimpers really didn't want the Coast Guard coming because they check everything – fire extinguishers and all that sort of stuff. So, over the years, as compliance improved, the DNR marine patrol would just do what they call courtesy checks at the dock. Before the open season – before the shrimp season opened in state waters, they would go down to the docks and just do courtesy checks.

SSD: Courtesy checks.

SM: Yeah. Instead of boarding them at sea and interrupting their towing and all of that, they would just do it at the dock to make sure all their TEDs were installed correctly.

SSD: So the only difference was that one was on the dock, and one was at sea.

SM: Right. That was easier on both the shrimpers and the marine patrol.

SSD: So then, the shrimpers were not going to be interrupted mid-tow and have to bring their nets up before maybe they were ready –

SM: Right.

SSD: – when they were out at sea. Do you know how enforcement of the use of TEDs has changed over the years? I mean, I know that you just answered that in a way, in that, rather than at sea, they were on the dock. But are there any other changes that you know of?

SM: I think it's gotten – it was always complicated to try to inspect one of those soft TEDs because here you just have a floppy net inside of a floppy net. And to try to make sure that the dimensions were correct and that the thing was taut – because that was the problem with the soft TEDs. When you got a new one that was just installed and everything was taut and correct, after it was towed, you know, several times, all [that] webbing just stretched and then it would start to bag, and then it would start to catch turtles again. So I think as fewer and fewer folks used the soft TEDs, I think that sort of made it easier for law enforcement to try to make the measurements and make sure everything was correct.

SSD: Do you know if soft TEDs were deregulated, or are they still in use?

SM: No, I think they're still actually on the books as approved TEDs.

SSD: That's too bad because it sounds like they only work for a short time.

SM: Well, the Georgia Marine Extension Service down in Brunswick, Georgia, has been trying to improve them to make them more efficient and less bagging, but I don't know exactly how that's going.

SSD: Anything else about how enforcement of TED use has changed over the years?

SM: No, I think that's pretty much it.

SSD: Then, going on to number eleven. Does your agency engage with other agencies involved with enforcement of the use of TEDs?

SM: The marine patrol officers had what they call dual commissions. That meant they can not only prosecute under state laws; they can also prosecute under federal law out in federal waters. And so not just on TED issues, but on other fishery issues. Then I think they also work alongside the one National Marine Fisheries Service agent we had up there, and then the Coast Guard. They work closely with the Coast Guard.

SSD: Good. That makes a lot of sense. And number twelve, how have TEDs affected the shrimp industry?

SM: I would say not negatively. Number one, they can harvest a cleaner and higher-quality catch, and they can do – they can actually – in fact, Georgia did this. They started charging more per pound of their locally-caught shrimp because they were of higher quality. As I mentioned before, the tows are more efficient, and they can keep the net on the bottom longer because it has less trash and bycatch in it. So that also makes the number of pounds of shrimp per, I guess, gallon of fuel also more efficient. It keeps the trash and fish from fouling their nets.

SSD: Right. One advantage that I had a shrimper tell me is that when the TED keeps debris out, it also lessens the likelihood that a piece of debris will get stuck on the bottom of your net and pull a hole in it.

SM: Right.

SSD: A hole in a net means huge loss of shrimp. Yes.

SM: Yes. Right.

SSD: So, anything else about number twelve and the shrimp industry being affected by TEDs?

SM: I think just in a sort of psychological way, they now feel good about the fact that they're doing something to help sea turtles, and they're not constantly being blamed all the time for dead sea turtles.

SSD: What evidence do you have of that?

SM: Well, that sort of goes to question thirteen.

SSD: Well, let's go to question thirteen. How have TEDs affected the sea turtle population?

SM: Well, I think they've probably saved tens of thousands of adults and juvenile loggerheads, Kemp's ridleys, all species – green turtles, leatherbacks – not so much hawksbills because



hawksbills tend to stay on coral reefs, and they don't tend to trawl there. But the other four species, I'm sure many, many, many have been saved. And I know how heartbreaking it was before TEDs to see this huge, two hundred and fifty-pound adult female, and you cut her open, and she's got shelled eggs in her, and to know that she's not going to lay any of those eggs [inaudible]

SSD: Oh, man. Wow.

SM: We just really don't see that anymore. A lot more of the turtles that come in have diseases, boat strikes or entangled, or things like that.

SSD: Terrific. Number fourteen. Why are sea turtles important?

SM: Did the Mississippi Fishery Museum add this question?

SSD: I did. I added it. [laughter]

SM: Well, that's good to know because if it had been them, I would've said, "Well, this just proves they don't get it yet." [laughter]

SSD: I just wanted to get on the record from everybody's point of view, why sea turtles are important.

SM: Well, usually, the shrimpers say, "Why do we have to have sea turtles?" Well, because they were here before us, and they have just as much right to be here as we do.

SSD: I totally agree with you. Absolutely agree with you that they have just as much right to be here as we do. Yes.

SM: Actually, they're a component of the ocean ecosystem, and back when their numbers were huge, we really don't know what role they played in that ecosystem, but scientists at the University of Florida have shown that the nests that are laid up on the dunes and in the dunes actually provide essential nutrients to the dune plants.

SSD: Wow. Yeah, nature doesn't waste much, does it?

SM: No.

SSD: Have you ever read Chief Seattle's reply to a president? It was written in 1854, and it's been called one of the greatest narratives on ecology ever written.

SM: Yes, I think I have.

SSD: Yes. In that, he says that, of course, all things are related. Then he adds that whatever befalls the creatures of the earth will eventually befall mankind. I often just personally wonder how people who are destroying animals and animal habitat and species – how they can think that

they're not self-destructing. Because it just seems so obvious to me that once you start – one species goes, then two, then three, then twenty, then one hundred, then two hundred, you know, how can human beings keep surviving themselves if they keep killing off all these species and making this earth uninhabitable?

SM: Have you read any of Daniel Pauly's articles?

SSD: I haven't, but I'll look that up.

SM: Yeah. He's out at the University of British Columbia. He's an excellent person to read and quite a character. [laughter]

SSD: [laughter] Well, I just violated a rule of doing oral history interviews, which is you're not supposed to state your own opinion, but I just couldn't help it. [laughter] Well, is there any other commentary you'd like to add about why sea turtles are important?

SM: What I've seen with the volunteers is really just awesome because people who see a hatchling go to the ocean or see an adult nesting, those people are changed forever, and it's pretty awe-inspiring. SO they actually enhance our lives.

SSD: Yes. It's a transformative experience.

SM: It is. And then people become turtle zealots. [laughter] And we have eight hundred turtle zealots.

SSD: Currently, there's a camera in an owl box in California. Have you seen that?

SM: I heard about it. I haven't looked at it yet.

SSD: I'll send you the address. I'm going to write myself a note to send you the – send Sally the URL on the owl. Yeah. So now I've become an owl zealot from watching this.

SM: We have, down on Hilton Head, one of the microwave towers has an osprey nest on it, and the people had – the company put a camera up there to watch the osprey nest. Last year, when they were getting ready to hatch, people can post comments on the website, and this one woman out in Minnesota said, "I hope these things hatch. I'm not getting anything done in my house. I just sit here all day waiting." [laughter]

SSD: [laughter] So funny. It's amazing that it hooks us in so much. But I think it's good. I'm glad that people get hooked into that. Do you want to move on to question number fifteen?

SM: Sure. That's fine.

SSD: Do you know the penalty for netting sea turtles currently?

SM: I don't know the actual monetary amount, but if a turtle is caught while using an approved, functioning, properly installed TED, then I think that's just considered part of incidental catch. But if the TED's been tampered with or disabled on purpose and then a turtle is caught, then that's a violation of the Endangered Species Act, and those are prosecuted. The fines can be in the tens of thousands of dollars. I just don't know the exact amount right now.

SSD: Do you mind if we go on, then, and talk a little bit about your background?

SM: Sure.

SSD: Well, where did you grow up?

SM: I grew up in Savannah, Georgia. It was a tiny little community sort of south of town on the Vernon River. We had a house on the river and a dock. So from age four until I went off to college, I was a river rat most of the time, and in the woods and in the fields.

SSD: That sounds like a lot of fun. Where did you go to school?

SM: I went to Armstrong Junior College in Savannah, and then I went off, my junior year, to Converse College in Spartanburg, and they did not have a Bachelor of Science degree. It was a Bachelor of Arts degree in biology. By that time, Armstrong had become a four-year college, so I came back to Savannah and got my Bachelor of Science degree in biology and then went to the University of South Carolina in Columbia to get my master's in biology.

SSD: Why did you choose your career path?

SM: I think it was – I was a liberal arts person. I liked everything – all my subjects. But then I think it was a situation where I had a really good professor my freshman year, and I really started liking biology.

SSD: Those good teachers make a big difference in our lives, don't they?

SM: Yes, they do. Yes, they do. I still keep in contact with him. He's got to be eighty.  
[laughter]

SSD: Oh, that's great.

SM: But he's still around. As far as my career with the DNR, that was sort of a happenstance. I was in the lab at the university, and my professor said, "I've got some folks coming from the DNR to meet with them, but I might be late. So if they get here before I do, would you just entertain them? Tell them about your research – whatever." So these fellows arrive, and one asked me, "Well, what are you going to do when you graduate?" I said, "Well, I guess I'll start looking for a job like everybody else," and he says, "Well, I have a job. Do you want a job?"  
[laughter]

SSD: Wow. [laughter]

SM: I said, “Doing what?” And he said, “Environmental education.” Well, since I had taught high school and I also had a teaching assistantship in college, I thought, “I can do that.”

SSD: Yes.

SM: So, there was my job. [laughter]

SSD: Yes.

SM: So I did that for three years with the DNR, but then I really missed the coast. I was up in Columbia. I really missed the coast, and I really wanted to get back more into research and biology, so I got a lateral transfer to come down to the coast in 1976, and that’s when I started setting up the sea turtle program.

SSD: That was when it really started heating up, wasn’t it?

SM: Yes. My first season on the beach was in 1977, and the loggerhead wasn't even listed then. We had people still stealing eggs from nests then. We would go out on the beach at night, and my soon-to-be-husband was – he was a co-worker then – he was doing research with radio and sonic telemetry on nesting females. We’d be out on the beach, and the poachers would be out on the beach. [laughter]

SSD: Wow. Was that kind of a scary, tense situation?

SM: No. They just ran away.

SSD: They did?

SM: Yes.

SSD: Good. [laughter] We talked about your title before you retired. What was a typical day at work for you? How about just choosing a very interesting typical day at work and paint a picture for the record so that in a hundred years, somebody listens to this and goes, wow, what a picture of the past.

SM: Well, I guess it was sort of a love/hate relationship, but one of the things I enjoyed most was doing aerial surveys. Then you’d get up before light, you’re at the airport, you take off at 6:00 when the sun’s just coming up, and you start flying. We’d start up around Murrells Inlet, which is at the county line between Georgetown and Horry County, and we’d start flying down the coast, just over the surf line, just off the beach, at about two hundred feet. I would count the turtle tracks along the beach all the way down the entire coast to the Savannah River. To be up there and see the beautiful coast in that morning light was really – I just never got tired of it.

SSD: Sure.

SM: But being in a single-engine airplane at two hundred feet has its problems. [laughter]

SSD: Yes. [laughter] Boy, that sounds nerve-wracking. I guess, though, if you were engaged by the work, you could kind of set that aside.

SM: Yeah. Well, you have to concentrate one hundred percent to see – because you see the turtle track on the beach. It looks like a big tractor went up there. You have to look at it and determine whether it was a nest or not because the turtle doesn't always nest. Sometimes she'll just crawl around and dig a few start holes and leave. So you've got about three seconds to see it, identify it, and record it.

SSD: That quick?

SM: Yes.

SSD: Wow.

SM: On some of the beaches where we had really high-density nesting, they come quick and fast. So it can be nerve-wracking at times, but still, it's interesting. Then, when we started doing stranding flights because some of our islands are still wilderness areas, and there's only boat access, and people don't get out there to record strandings very often. So we would fly the coast to look for strandings. To make a complete circle, the return trip, you'd fly out over the ocean about a mile offshore and just see all kinds of neat things down in the water.

SSD: Wow. Like what did you see?

SM: Well, just huge schools of these cownose rays. We saw a school once that was probably a quarter-mile wide and fifty miles long.

SSD: And that's a ray – like a stingray?

SM: It's like a stingray, only it's about three feet across.

SSD: I didn't know rays ran in schools.

SM: Oh, they come – that's what the shrimpers said they were inventing their soft TEDs to help get rid of, was the ray.

SSD: Right.

SM: We'd occasionally see whales and see bottlenose dolphins all the time, see dig sharks.

SSD: Turtles?

SM: Oh, and lots of turtles. Yes.

SSD: Yes. Lots of turtles. Oh, that's good news.

SM: Then, in the early '90s, we started getting leatherbacks up here that we didn't before, and it's always – then we started doing surveys specifically over the water to count leatherbacks, and that was fun.

SSD: Do leatherbacks not come inshore? Or onshore, I guess, is what I mean.

SM: We started getting a few nests. In fact, the first nest we saw was in 1991, I believe. So that was seen during an aerial survey, but they're very rare up here. I think we've had maybe half a dozen. I don't know the exact number anymore since I retired.

SSD: Right. Do the females come onshore at night only?

SM: Yes. Loggerheads do now. Kemp's ridleys is a species that doesn't nest up here, but they are daylight nesters down in Mexico and Texas.

SSD: Somebody told me that the male sea turtles never come onshore again. Do you know if that's true?

SM: Well, I would never say never because there are always exceptions, and we did have an instance where one came onshore in pursuit of the female. I mean, she came out of the water to get away from him, and he followed her up on the beach. So yes, they do come ashore occasionally. In certain places of the world, they'll haul out just to bask and warm up.

SSD: They'll get too cold?

SM: Yes.

SSD: Then they want to seek the sunlight?

SM: Yes.

SSD: That's really fascinating. I grew up in Gulfport, Mississippi, and I was a beach rat and spent a lot of time with a big dog, a Rhodesian Ridgeback, in high school, running up and down the beach. I was back there – I guess it was maybe about 2000, 2001. I had my bloodhounds with me. I have these two bloodhounds from rescue.

SM: Holy cow. [laughter]

SSD: They're from rescue. I had them on leash. At that time, I didn't know you weren't supposed to have dogs on the beach. It's the first time I ever saw a turtle on the shore in Gulfport, and I don't know if it was dead or just kind of stunned. I didn't know who to call or what to do with it or anything. It really was fascinating just to see the turtle lying there. It was big, probably weighed two hundred pounds. I really couldn't budge it myself. I would just love to see them alive and swimming or walking on the beach or something. When you talk about the

volunteers having a transformative experience, almost a mystical experience because it is life-changing, I can only imagine how fabulous it would be to be working with the live things, especially after being so fascinated by seeing that one turtle that wasn't moving.

SM: Well, you should come to the East Coast this summer and see some turtles.

SSD: I know. You're right. I should. I think I'll plan on it. Is there anything else you'd like to get down on the record about your work and career? Any memorable experiences or anything that you'd like to have on the record to be here for future generations?

SM: Well, I did this for thirty years, and I guess I would say I created and established the turtle program here. I fought the good fight, and I think when I retired, it was just time for these young folks to take over. They've got the electronic expertise and computer expertise, and they could take it to the 21<sup>st</sup> Century, which I couldn't do. I'm a dinosaur when it comes to computers. [laughter] I can get by, but not like these young folks.

SSD: Talk about a love/hate relationship.

SM: Yes.

SSD: Well, shall we move on to question twenty-one, then?

SM: okay.

SSD: I read that some sea turtles are capable of anaerobic respiration or – I believe that means respiration without oxygen. Why doesn't that prevent sea turtles from drowning in nets?

SM: Did you really read that about sea turtles or turtles?

SSD: I'm not sure. Of course, my source was Wikipedia, so – I'm pretty sure it was sea turtles. I don't think I looked up turtles in general. I just looked up the sea turtles.

SM: Well, there are some turtles that can actually respire through their anus, but they're not sea turtles. The reason they will drown in a net is that when they're in the net, they first try to swim out of it, and then, as they run out of energy, they just fall back farther and farther into the trawl, and then they start struggling. So all this uses up the oxygen fairly rapidly. This causes the blood to become acidic, and then if they do get out of the net, they can – it takes hours and hours and hours to restore that blood chemistry, which is what we think might be a problem, why we're still getting drowned turtles even with TEDs, is multiple captures. They get through the TED, but then they're exhausted, and another boat comes right behind them and catches them again, and they still might go through the TED, but – and there's nothing you can do about that. I mean, to me, that's just part of the price to pay to have shrimp boats and turtles.

SSD: Yes. You're the first person who has addressed that question. I'm so glad you told me about acidic blood and that it takes hours and multiple captures. Of course. If it just got out of

one net and then it has to struggle through another one, that's just too much. It's like real, real prolonged tow time; being caught in a net would have the same effect.

SM: Right. Do you know the lady that used to be the head of the Texas Shrimpers' Association? I think she just died maybe a year ago.

SSD: I don't know. We were given a list of people to interview by the funding – the grant named them. I could look and see if there's a name on there that rings a bell.

SM: It's something like Lila or something like that.

SSD: No, there's a Kiki Jenkins?

SM: Oh, yes. Kiki is young.

SSD: She is? Okay. Let's see. Let me find a woman's name on here.

SM: She wouldn't be there because she's dead.

SSD: Oh, okay. No. Then I don't know who she is.

SM: Anyway, I was at a meeting over in Galveston, and she was there. I talked about this problem with prolonged submergence and multiple captures and the blood acidic. She stood up, and she said, "Oh, no, they just come to the surface and take a big, deep breath, and they're fine." I said, "No, they're not fine. I just told you they're not fine."

SSD: Yikes.

SM: So we had sort of this yin and yang in front of this meeting. She was really antagonistic.

SSD: So she was arguing with the science, though.

SM: Right.

SSD: Unbelievable. It's hard to know what to do with people who won't face the facts.

SM: Right.

SSD: Well, are there other things in addition to TEDs that might mitigate harm done to turtles by shrimping?

SM: Don't shrimp. [laughter]

SSD: Yes. [laughter]



SM: Yes. This was something that – there was some research doing in the Gulf of Mexico that was called alternatives to TEDs. I thought, “What a waste of money. Who funded this?” There are no alternatives to TEDs except don’t shrimp.

SSD: So they didn’t really come up with anything?

SM: No.

SSD: I wondered if there were other methods besides bottom trawling that would catch shrimp and not catch turtles. Do you know?

SM: Over here in South Carolina, up in the Georgetown area, there’s Winyah Bay, and this is a unique body of water in that it’s got four rivers that come into this big bay. Then you’ve got the incoming tide really pushing – it’s like a tug of war between the incoming tide and these four rivers. So when the tide turns and starts to ebb, it’s like somebody pulled the plug, and there’s a huge, fast current going out that bay. So in that one particular spot in the state, people – shrimpers can actually set what they call channel nets, and these are shrimp trawls, but they’re staked to the bottom with poles. The current actually opens the net and deploys the net. So the current sweeps the shrimp and whatever through the nets. But there was one year, where I think it was in October, where we had nine strandings, which is pretty high for that time of year, and eight of them were in Winyah Bay. So then the department said, “Okay, it’s obvious these things need TEDs too.” People can use cast nets. You don’t catch the volume of shrimp as you do with a big trawler pulling two forty-foot nets, but that is a way to get shrimp without killing turtles.

SSD: Question twenty-two that I wanted to include – does bottom trawling harm the ecosystem of the Gulf of Mexico?

SM: That’s why I said yes. [laughter]

SSD: Can you explain how it does?

SM: Well, a lot of areas that have live bottom, shrimpers will trawl across these things. They’ll sometimes drag chains to actually break up the live bottom so they can trawl later without getting all of the stuff in their nets. So, yes, the bottom trawling just disrupts these live bottom areas that have rooted algae and other things there.

SSD: So the definition of live bottom would be a place where there’s rooted algae and what other kind of life?

SM: Well, it could be some soft coral or even some hard coral, sponges – those are the sorts of things you see in live bottom areas. These take a long time to establish, so once you’ve dragged across them and pulled them up and broken them apart, then that’s pretty much it. They don’t come back in a very long time.

SSD: And won’t come back if people continue to trawl over them anyway?

SM: Right. Right. Once they're gone, then that area can be trawled more easily, and then they don't exist anymore.

SSD: They're gone forever. At least as long as there's trawling. When there are no more human beings, they'll come back.

SM: Right.

SSD: And number twenty-four – I read that midwater trawling is relatively benign compared to bottom trawling. Do you agree or disagree with that?

SM: It's certainly benign compared to what we just talked about in that you don't disrupt the benthic community. But turtles are still in the water column, and so there's certainly a chance that turtles will be caught in these trawls as well.

SSD: Could you define for the record the benthic community?

SM: Well, it's the bottom community. It's what is attached living on or near the bottom. That's the definition.

SSD: For the record, what is a water column?

SM: That's from the bottom to the surface.

SSD: Anything else you'd like to add for twenty-four?

SM: No, that's pretty much it.

SSD: Well, on question thirty-one, getting rid of all those other questions about the Gulf of Mexico, what happens to the bycatch that die when shrimpers net them?

SM: Well, some species they can keep and sell. Some fish species might be retained for sale. The invertebrates, the algae, all that sort of thing – crabs – most of those are swept overboard. Some of the juvenile fish, which had been the concern – it appeared that croakers and spots and juvenile fish that, if allowed to grow up, would become sports fish, were dying. Of course, if you've ever seen a trawler, you'd see hundreds of seagulls following it, so the birds have a feast. Dolphins will take fish that are caught in the trawl as it's going through the water, and, of course, as these things get swept overboard, I'm sure other fish, sharks have a ready feast. Those that aren't consumed just sink to the bottom and eventually decay.

SSD: Is there any good that comes from the decay of these bycatch that sink to the bottom?

SM: Well, the organisms that help break them apart and decay them, I'm sure that's a source of nutrients for them. Everything has a web in here.

SSD: What are the lessons learned from using TEDs?

SM: The first thing, I think, is that the shrimpers were all chicken littles. You know the story of chicken little.

SSD: [laughter] The sky is falling.

SM: The sky is not falling. I mean, they all predicted economic ruin from the TEDs, and the economic ruin they now know is not from the TEDs. It's from imported shrimp and high diesel cost. The intelligent, professional shrimpers readily accepted the TEDs and got on with life. The ones that didn't are probably still resentful and finding fault with them.

SSD: But maybe just weren't educated enough to understand that this could help you just as easily as you think it could harm you.

SM: Well, to be educated, you have to be receptive, and some of them just aren't. They don't want the government telling them what to do – end of story. Volunteer compliance doesn't work. It's not going to work. The other solution that NMFS tried to come up with, like reduced tow times –

SSD: Oh, yes.

SM: – that was just unenforceable. I mean, you would have to literally film a shrimper from the time his net went in the water until it came out of the water, and law enforcement's not going to do that.

SSD: Well, it would create jobs. [laughter]

SM: Yeah. Right. [laughter]

SSD: okay. So voluntary compliance doesn't work. Reduced tow times are unenforceable.

SM: And shrimpers are chicken littles. [laughter]

SSD: Anything else?

SM: On thirty-two. Yes. That's about it.

SSD: Well, is there anything you'd like to put on the record that we have not talked about?

SM: Yes, there is. In fact, it's actually the title of your grant. I found that rather amusing.

SSD: Really? [laughter] Well, for the record, the title is TED Tales: Preserving and Celebrating a History of Innovation in NMFS and the Shrimping Industry.

SM: Right.

SSD: So tell me about the title.

SM: Well, I would say, “Celebrating a history of innovation in the shrimping industry.”

SSD: okay.

SM: There was no innovation in NMFS. They didn’t do anything innovative. They – the shrimpers were the ones that invented the TEDs that everybody is using. Like I said before, NMFS spent \$4.5 million innovating a TED that nobody uses.

SSD: Yes.

SM: They're also, I think, engaged in a sort of rewrite of history, which is why I sort of appreciated doing this interview to make sure that at least those of us that were around when all this was going on are on the record.

SSD: Yes. I believe it was John Mitchell – I don’t know if you know John Mitchell –

SM: I know a John Watson.

SSD: I haven’t interviewed John Watson yet, although he’s on the list. But John Mitchell works for NOAA somehow, maybe at Sea Grant. I’ve interviewed so many –

SM: I recognize the name. I just can’t put a face with it.

SSD: Yeah. He is someone I remember specifically who said the shrimpers – it was the feedback from the shrimpers that developed the TED. So we’ve got a couple of people on the record who are giving shrimpers credit for collaborating and cooperating, being part of the team who made the TEDs work, and that’s good.

SM: Well, John Watson – it was interesting because he was the one who was heading up sort of the TED program for NMFS back in the old days, and the agency gave him some sort of award. Here’s a guy; he gets an award for developing a TED nobody used. [laughter]

SSD: Yeah. Well, tell me it isn’t a government operation, right?

SM: Right. I guess the most irritating thing is there’s a scientist at the Miami laboratory, and she wrote a chapter in a sea turtle biology book, and the whole chapter is about the TED things. That is really a rewrite of history because she starts the whole TED issue in 1989 when she says Congress declared that we needed a study to look at what was going on. You can see from our conversation today that a lot more was going on before 1989, and Congress didn’t just say, “Oh, wow, we need a TED study.”

SSD: Right.

SM: The Gulf Coast shrimpers were lobbying Congress because they didn't believe the NMFS data that said how many turtles they were killing. So it was their pressure on Congress, and there's just a lot in this chapter that is just funny.

SSD: Maybe you should write a book for juvenile literature that's historical fiction to give another side of that story to kids in school.

SM: Well, I was thinking of just going through this chapter and refuting what she says and just sending that to a sea turtle publication. Because I really – it's a disservice to the shrimpers themselves. See, a design – and I guess the worst thing in this chapter is that she just talks about TEDs or the TED, and she doesn't distinguish between the one they did and the one the shrimpers did. To me, that's just not kosher.

SSD: Well, it might not be politically correct to distinguish. It might not be politically correct to distinguish that way for her.

SM: She's an employee of NMFS. The people who reviewed the chapter are employees of NMFS.

SSD: So it's the NMFS culture.

SM: Right.

SSD: Yes. Well, I think you should write a refutation.

SM: Yes, I should. [laughter]

SSD: Yes. That's a good idea. You really should. I mean, history needs you to do that. Really does. Well, is there anything else that you'd like to add to the interview?

SM: Let me think. Well, I guess I should say I like shrimp; I eat shrimp. Some of my turtle colleagues boycott shrimp – won't eat shrimp. I grew up eating shrimp. I'm not going to stop eating shrimp. [laughter] I just did what I could do to make sure my local consumption of shrimp doesn't impact the species I'm trying to save.

SSD: Right.

SM: I don't eat foreign shrimp. I ask the restaurant, "Where did these come from?" If they don't know, I order something else.

SSD: Right. Yes.

SM: Because they don't even taste good anyway.

SSD: That's true. Yes. Why do you think there's a difference in taste?

SM: I don't know. The shrimp here, you got them – they're just sweeter. They taste like shrimp. They don't taste like chemicals.

SSD: Do you think that the difference is because one is wild-caught and the other is farm-raised?

SM: I think so. Our own department had an aquaculture facility that they were trying to experiment with to get it completely self-enclosed, so they're not sending out disease or a lot of nutrients into the local waters. They've managed to do that. But they're feeding the shrimp just some sort of soy meal.

SSD: Soy meal.

SM: I think so. I'm not sure. I know it's – they had a taste test with wild-caught shrimp and farmed shrimp fed one thing and farmed shrimp fed this other thing which they say is even safe for pregnant women – you could eat these shrimp. Well, they were tasteless, and everybody picked the wild shrimp. It was obvious. They were the best tasting.

SSD: Wow. Amazing.

SM: So when we said these other things don't taste like anything, their answer was, "Well, you put enough cocktail sauce on them, you might not notice the difference." [laughter]

SSD: [laughter] So funny.

SM: Yeah, I thought that was funny, too.

SSD: I don't like raw oysters, and my husband does. That's what he says. "Well, you just don't put enough cocktail sauce on them." What's the point, you know? [laughter] You could take cardboard and put enough cocktail sauce on it to make it taste good.

SM: I don't like raw oyster taste, either. I also don't eat filter feeders unless they've been cooked.

SSD: Oh, yes. Ocean pollution – boy, that's a whole other topic.

SM: Right.

SSD: But I did want to ask you this question. It arose for me for the first time, and you're my tenth interview. What do wild-caught shrimp eat?

SM: They feed just – the reason people devalue shrimp is because that vein is not really a vein. It's the intestinal tract, and it's full of mud and sand. So it's real gritty to eat. So what they're doing is, they're just shoveling sand and mud up into their mouths. Whatever's down in the mud – it could be little worms or whatever – that's what they're eating.

SSD: Whatever is living in the mud.

SM: Right.

SSD: For the record, can you define deveining?

SM: It's just running a knife down the back of the shrimp and taking out that intestinal tract that contains the mud.

SSD: Before the deveining is done, you can see it because it's a dark vein –

SM: Right.

SSD: – that runs the length of – like a dorsal stripe on the back of the shrimp.

SM: Some people don't bother to do it. It's just not really necessary unless it's gritty. On a really large shrimp, it's not very attractive, but on the small ones, most people don't bother to do it.

SSD: Put enough cocktail sauce on there, and you won't even see it.

SM: [laughter] Right. You won't see it.

SSD: What about ocean pollution? Do you have any information you'd like to put on the record about ocean pollution?

SM: Not so much my thoughts, but they're thoughts of a colleague, and you might want to try to look him up on Google or something. It's Dr. Wallace J. Nichols – N-I-C-H-O-L, I think – Nichols. And he's out in California, but he's a very creative, intelligent person. He did a talk recently. He traveled over here and went down to Marineland in Florida to give a seminar. They live-streamed it, so I watched it. He says the problem with the ocean is really simple – three things. We're taking too much out, we're putting too much in, and we're destroying the edge.

SSD: The edge.

SM: Yes.

SSD: What does that mean?

SM: The shorelines. The beaches. We're destroying the edge.

SSD: By our human encroachment, building on them.

SM: Right.

SSD: That's brilliant. It's so simple, and it really – it's the essence. Lots of commentary that could be written about it and talked about, but that's really – that's it in a nutshell.

SM: If you read any of the articles by the fellow I told you about – his name just escaped me – out in British Columbia.

SSD: I've got it written down. Let's see if I can find it. Daniel Pauly.

SM: Daniel Pauly. He mainly deals with the taking-out part.

SSD: okay.

SM: The collapse of fisheries.

SSD: Daniel Pauly. Yeah. You know, I think about the Japanese and the whales, and I think to myself, "Don't they worry about what they'll do when the whales are all gone?" They can't raise cattle; they don't have room.

SM: Right.

SSD: I don't know. I just don't understand how people don't think ahead.

SM: I think that what I've seen from the fishermen is that their mentality is everything in that ocean belongs to them, and they have the right to fish it until they catch the very last one.

SSD: That's so self-stultifying, though. I mean, it's suicide.

SM: But that's how they think. Our shrimpers here – our state made a sixty-day-long cast netting season where you can cast over bait. All that does is concentrate the shrimp in a small area so that when you cast, you get a whole bunch in one cast. The shrimpers' associations were opposed to it because these people were catching their shrimp.

SSD: Interesting.

SM: That says it all.

SSD: Even before it's in their net, it belongs to them.

SM: Right.

SSD: Wow. Well, is there anything else you'd like to add?

SM: Well, I've really enjoyed talking with you.



SSD: Thank you. Thank you so much. And likewise. Thank you so much for letting a total stranger call you and pepper you with questions, and give such good answers. I really appreciate it.

SM: Well, good. A trip down memory lane.

SSD: Good. I'm going to go ahead and turn off the recorder.

-----END OF INTERVIEW-----  
Reviewed by Molly Graham 10/26/2021