

MARITIME & SEAFOOD INDUSTRY MUSEUM AND
THE UNIVERSITY OF SOUTHERN MISSISSIPPI

AN INTERVIEW WITH MICHAEL HARRIS
FOR THE
NOAA VOICES ORAL HISTORY ARCHIVES

INTERVIEW CONDUCTED BY
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SOCIAL CIRCLE, GEORGIA

MAY 10, 2010

TRANSCRIPT BY
FANTASTIC TRANSCRIPTS

Stephanie Scull-DeArmey: Okay. Looks like it's working. This is an interview for the Maritime and Seafood Industry Museum and the University of Southern Mississippi. The interview is with Mr. Mike Harris, and it is taking place on May 10, 2010, in Hattiesburg, Mississippi, on my end, and in Georgia on Mr. Harris's end. I am the interviewer, Stephanie Scull-DeArmey. First, I'd like to thank you, Mr. Harris, for taking time to talk with me today. I'd like to get some background information about you, so I'm going to ask you for the record: could you state your name, please?

Michael Harris: My name is Michael J. Harris. I go by Mike Harris.

SSD: And, for the record, could you spell it for us?

MH: M-I-C-H-A-E-L H-A-R-R-I-S.

SSD: Okay. When were you born?

MH: I was born November 21st, 1953, in Colquitt, Georgia.

SSD: How do you spell that?

MH: C-O-L-Q-U-I-T-T.

SSD: Okay, great. Well, let's dive right into these questions that the museum would like to have asked, and I'll start off and ask you, what role did you play in introducing TEDs [turtle excluder device] to the shrimping industry?

MH: All right. I went to work for the Coastal Resources Division of Georgia DNR [Department of Natural Resources] in the fall of 1986. By that time, the issue of sea turtle incidental capture was well-recognized, but really doing something about it was still under development. Of course, the National Marine Fisheries Service was working on a federal rule for TEDs. One of the projects I worked on early on – we sort of knew that a requirement for TEDs was in the works, and someone – it wasn't me – had a bright idea that – there was an energy efficiency program that was going to be providing a rebate. I think everyone with diesel engines in Georgia might have been overcharged through some kind of problem with the pricing of fuel, and the Georgia Environmental Facilities Authority had been awarded some money to do programs to help rebate that indirectly to the people who had been impacted. Of course, the shrimp boats were all powered by diesel engines, so the project was to submit a proposal to this fund and buy TEDs. It would be provided free of charge to Georgia-based trappers. Although I wasn't personally involved in the initial development of the project, I was involved in the implementation of it, figuring out how it would actually be done in terms of getting the TEDs to the shrimpers. Of course, the energy efficiency benefits of that would be the reduced amount of bycatch in the trawl and a greater amount of area that could be towed for the same amount of fuel burned in the engine. Of course, on the conservation side, the benefits of turtle excluder devices. So that was one of my earliest involvements. I was also involved with the Sea Turtle Stranding and Salvage Network [STSSN] in

Georgia. We got some early funding in '87 to make that network more comprehensive, both in terms of the area covered and the frequency of coverage. The next project I worked on was passing a state regulation to require TEDs, and we had a couple of things that we wanted to do with that. We had a few areas that were within the waters that are typically open to shrimping; they were considered to be outside of our sound beach boundary lines, but they were on the shore side of the [inaudible] lines that the feds were using for the demarcation of where TEDs had to be used. So that created some – although they were small, they were problematic areas for the use of TEDs. A shrimper would be able to fish in that area, at least theoretically, and not go into the waters where TEDs were required. So that was one of the issues. The second issue was, we began to realize that the timing for which TEDs were required in the early rule was probably not a long enough period of time to provide adequate protection for turtles that were in Georgia's waters. In other words, in some years, they showed up before TEDs were required by the federal rule in April, and that was a problem as well. So I did work on the state regulation to require TEDs under our own state Endangered Wildlife Act, so I certainly don't claim to be one of the lead players in the overall effort, but I think I was pretty well in the thick of what was going on in Georgia, and of course, Susan Shipman was my supervisor at that time, and she was very much engaged in all the rule-making and the other projects as well.

SSD: I'll be talking to her next week.

MH: We had some interesting times [inaudible].

SSD: [laughter] Just to back up and ask you a few things for the record – the network for salvage and stranding – can you define for the record what a stranding is and what you mean by salvage?

MH: Yes. A stranding is a dead or injured sea turtle that washes up on the beach, and the salvage part of that was to collect those carcasses and try to obtain some biological information from them, at least the size of the turtle – was there any obvious injuries that might have resulted in that animal washing up on the beach, a fishhook that might be embedded in the animal somewhere, or wounds from propellers? In some cases where a carcass was fresh enough, it could actually be necropsied, and maybe a little more information obtained, including what the animal had been eating, if anything, and that kind of information. So the stranding network was one of the early kinds of assessments that really helped to indicate the problem with interaction of sea turtles and shrimp trawls, and after a number of years, by 1986, '87, we had had a few places in Georgia that had had very consistent coverage for seven years, starting in 1979, Cumberland Island in particular. So the relationship between the opening of the shrimp season and the big increase in stranded turtles and everything was pretty obvious after a while.

SSD: I've done enough interviews now to have heard – I think it was Sally Murphy – say one thing about shrimpers and turtles and to hear shrimpers say another thing, and it's interesting because the shrimpers will say, "I might have caught one a year. I might have drowned one turtle a year." These are old-timers who go way back. Then Sally Murphy

said, “Right, then there were five-thousand shrimping boats.” So that’s five-thousand turtles a year if it really is just one, and it may indeed be one or two or three. So the shrimpers just didn’t think it through that there are so many of us, and if we’re each catching one, then, okay, I see that we’re having an impact. But it’s really not my job as an interviewer to tell them that.

MH: Right. And I think, in certain places, that was probably true. I don’t think there were many places in Georgia that a shrimper with a straight face would tell you that they only caught one or two turtles a year, even twenty years ago when the populations of the juvenile-size were probably not as large as they are now. But that’s just my opinion.

SSD: Yeah. How much beach does Georgia have? Do you have a ballpark figure in your head?

MH: Yes, we have about a hundred miles of beach. That’s just a rough – and most of that was accessible and included in the – was checked on a regular basis. There were a few places that we weren’t able to get to.

SSD: Okay. All right. And is some of the hundred miles on barrier islands?

MH: Oh, all of it is, yes.

SSD: Oh, all of it is? Okay. Do you have any man made beaches along the shore itself, the mainland proper?

MH: No. We have no mainland beach in Georgia. It’s all barrier island beaches.

SSD: OIs there anything else about the first question that you can think of that you’d like to put on the record about the role you played?

MH: Well, I think some of the other questions – we’ll get to that. But as we developed our state rule, then we did training for our law enforcement guys so they would know how to properly inspect vessels to determine if they had a legal TED. We worked a lot to publicize to the shrimpers how TEDs needed to be installed, and so just getting the rule – and then, of course, many changes were made to the rules over the years. In fact, I guess the last ones were not all that long ago, so it’s been an ongoing process, and, although I’ve been less directly involved in recent years, somebody in our department has been pretty much in the thick of that, right since the beginning.

SSD: Yes. Did you guys go through having voluntary compliance in the beginning?

MH: Yes. That was looked at and tried, and that was something we all just realized wasn’t really a practical – we didn’t do that with our state rule. I think the federal rules looked at that as some alternatives, and it’s just not practical for the way shrimping’s done in our waters, so that never really had a – I think most folks would say that was not

going to be a successful alternative because of that. The tow times and all are just much too long relative to how long a turtle can be submerged.

SSD: Yes, especially if it's not the first time the turtle's been caught, and it's already tired. What was I going to ask you? The TED itself – was it the NMFS [National Marine Fisheries Services] TED?

MH: Yeah, that's a very interesting story, and Susan can tell you more about that. You know, Sinkey Boone – have you interviewed Sinkey? Is he on the list?

SSD: I have interviewed Sinkey, yes.

MH: Yeah. Well, he's probably told you all about this with the jellyball shooter, and of course, the initial TEDs we gave away were not the Sinkey Boone TEDs. They were the National Marine Fisheries Service-developed model from Pascagoula, and although they were very well-made, high-quality, they were not popular with our shrimpers, and I know Sinkey probably gave you many reasons why that was. They probably were over-engineered for what would actually work in the practical, everyday world. So after much complaints from the industry, the second round that we dispersed were the Sinkey Boone-type models, which – the basic design is still a major part of most of the TEDs that are out there. So I think Sinkey deserves a lot of credit for that original – although he wasn't, at least to my understanding, developing that to benefit the turtles originally – it was to get rid of those cannonball jellyfish – it was, in fact, sort of the basic prototype that later became kind of a standard.

SSD: Gosh, if he hadn't already developed that TED, they might have closed down the shrimping waters.

MH: Well, I don't know about that. But he made a good contribution; I would certainly agree with that.

SSD: Yes. He told me that their nets would absolutely fill up with those jellyfish, just fill up, and they might make one or two tows and get nothing but jellyfish. So necessity is really the mother of invention.

MH: Yes.

SSD: But Sinkey – I don't know if he's gotten too old or if he just got tongue-tied. He did not go into a lot of detail in his interview.

MH: Is that right?

SSD: I think he's a little resentful and bitter that he hasn't been given a patent for it. That's my understanding. He has somehow not been given the credit that he thinks he's due for the TEDs that are now in place. So it was kind of sad talking to Sinkey. So that

did bring us into question number two, but can you tell me a little bit more about how TEDs were viewed in the early days?

MH: Well, partly because of Sinkey and because of the use of that jellyball shooter by at least some of our fishermen, prior to the requirement for TEDs, we never had the same level of – what’s the right word – conflict that they had in the Gulf. We never had a blockade in any of our channels like they had in the Houston Ship Channel, at least in the very early days. People objected to TEDs. We had some pretty interesting comments at some of the public meetings, both for the federal rule and for the – I can remember a little guy old enough to be my grandfather just cussing me a blue streak in the parking lot [laughter], and he had his finger in my chest telling me where I was wrong about why we needed all this, and his wife had his other arm, trying to pull him back and calm him. It was not dangerous or anything like that, but he had many objections to the whole idea. But I appreciated him coming to the meeting, and it all worked out in the end. But they weren’t wholly accepted by any means. But the controversy we had here, at least on the Georgia part of the East Coast, was not nearly as much of a problem as what I understood that happened in the Gulf.

SSD: Not as much resistance?

MH: Yes.

SSD: And not as much non-compliance, you think?

MH: I think that’s true, although we certainly did have some non-compliance, and I can remember a specific example in the early days – you know, I went with some of our guys to do boardings and see for myself how things were happening. We got on a boat down at the south end of the Cumberland, and he hauled back his nets, and he had the soft TEDs installed, which was another kind of early design, and both of them had been split right down the middle to make them nonfunctional, and he had a turtle in each net. So I personally saw that myself. Now, he was in a place where – down off Cumberland is a really good place for turtles to be, so he was kind of in the hotspot. But there’s a lot of various kinds of organisms that grow on the bottom, the bryozoan in particular, that gets pretty thick there, and it really clogs up those soft TEDs. So it was easy to see why he did what he did, but it also certainly made them nonfunctional in terms of the turtles. But I would say overall, acceptance and compliance was probably better on our side.

SSD: Well, going back to that particular incident, what was it you said would have clogged up –

MH: I believe the organism is sort of a soft, coral-type organism. I think it’s a bryozoan. I don’t know the specific scientific name of it, but at times it is abundant on the bottom just north of the jetty at the south end of Cumberland where this gentleman was fishing, and that was the reason that he, I think, had modified those soft TEDs. I don’t think it would be as much of a problem with a hard TED.

SSD: That grid, the metal grid?

MH: Yes.

SSD: Yes. So that coral was not protected because it is coral? They could drag –

MH: No, it's not.

SSD: Not protected. Just for the record, can you define what you mean by a boarding?

MH: Yes. A boarding is an inspection visit to a shrimp boat carried out by the Coast Guard or by DNR law enforcement, and they actually go up to the boat, and the law enforcement agents get on board the shrimp boat from the law enforcement vessel, and you normally do that while the boat is actively fishing, and then, of course, they have to haul their gear in so that you can look at it and see how it's configured and whether or not the TEDs are properly installed.

SSD: Do you remember what the penalty was for that gentleman on that day?

MH: I do not. I know that he had a fine, but I don't remember what the amount of it was.

SSD: Did he have to stop shrimping until he –?

MH: Yes. He went to the dock immediately.

SSD: Did you guys confiscate that nonfunctional TED?

MH: I don't recall that. I believe that it was taken as evidence, but I'm not a hundred percent sure.

SSD: Yes. So there was some resistance, but nothing as – what's the word? – maybe politically ambitious as a blockade of any kind of dock.

MH: Right. Yes. It was a lot of grumbling and maybe comments over the VHF or the radio. But no active kinds of resistance like a blockade or anything like that.

SSD: Okay. Do you have any idea how the TEDs are viewed today by the shrimping industry?

MH: I've not talked recently, but I think they're pretty well-accepted by the industry now. At least, that's my impression. Of course, there are also other bycatch reduction devices to help with the escapement of fish from the nets as well that are required, and even eight or ten years ago, I think there were a good many fishermen that realized and appreciated the benefits of TEDs in terms of getting rid of horseshoe crabs and other large kinds of species that they didn't really want to catch anyway.

SSD: For the record, why would they not want to catch those?

MH: Well, they weren't economically valuable, and they would increase the amount of time that it took to sort the catch on the deck. In other words, the TEDs would help to produce a cleaner catch that would be – easier to pick up the shrimp from among all the other critters that were caught.

SSD: Yes. What happens to bycatch on a shrimp boat? Does it go back into the ocean alive?

MH: No, most of it, I think, is dead by the time it goes back. Some of the critters – the crabs – of course, they might keep those, if they're – enough market for them, but most of the fish are dead when they go back in my experience.

SSD: Are they allowed to keep the crab with their shrimping license?

MH: For Georgia, I believe that they are, yes.

SSD: Okay. That's interesting. What if they were catching some kind of fish that they would eat on board? Are they allowed to do that and not have to throw them back?

MH: Yes, yes, they are. Yes.

SSD: Since, I guess, they're going to die anyway, it wouldn't matter.

MH: Right.

SSD: Is there anything else about how they're viewed today that you'd like to comment on?

MH: No. I think that pretty well covers it.

SSD: I know you've talked about some of the challenges faced in developing TEDs. Does anything else come to mind when you think about that fourth question?

MH: No. There were many technical challenges of developing one that would work in different kinds of fishing conditions. I think there were the challenges of getting them used in the industry, both accepted and then also having enough enforcement that they were used properly. The full range of making changes like that to an ongoing fishery – social changes, economic changes, everything down the line. But we've talked about a good bit of that. Obviously, we know from experience that you have to have a regulation, and you have to have enforcement of the regulation. It's not something that you can do just voluntarily. I think that's one of the lessons learned.

SSD: Yes.

MH: Even though some people would adopt them voluntarily and use them, certainly everyone would not, and that's just the way things work.

SSD: One of the things that has come up in interviews that I've done is, the shrimping culture was always, you don't want a hole in your net, and if you get a hole in your net, you fix it as soon as you can. So that whole culture had to be overcome.

MH: Right. Yes, that's true. I heard that quite a bit, and that's part of the social aspects of it.

SSD: What about the fishermen's independence? Do you think that came into play?

MH: Yes. I think so. I mean, they tend to be a very independent bunch. But on the other side of that is that they are familiar with and live in a culture of regulations. There are regulations about when you can shrimp. There are regulations about where you can shrimp. So the idea of being in a regulated kind of an activity – even though they're very independent, they also lived in a world where regulations were part of the management of that industry and that business, so it was not totally foreign to them that there would be rules and regulations they would have to comply with.

SSD: Right. Very good point. Anything else about challenges faced in developing TEDs?

MH: No. I think that pretty well covers it.

SSD: Well, I think we've touched on number five too, but if there's anything you'd like to add – what were the challenges faced in getting the shrimping industry to use TEDs?

MH: I think we've talked about that, pretty much. I would say that having a good program of enforcement is something that you just have to have, just like enforcing any other regulations in a regulated industry. But I think, where we could, just like that program with giving away the free TEDs, we tried to do what we could to help the industry as much as possible as well, and not just have a regulatory approach. So I was glad to be a part of that aspect of it, although it wasn't my idea, and I don't take any credit for that. I thought it was a great project, and it was at least an attempt to help them deal with the cost of adding that conservation gear the first time that they had to buy it. So that was a good effort.

SSD: Yes. In terms of education that your institution offered to the shrimpers, the fishermen, did you guys ever feel that it was all right to say something like, "This isn't just for turtles, you guys? You can also get rid of horseshoe crabs and other unwanted bycatch."

MH: Yes. We tried to talk about the other benefits. The other thing we had going for us is that at least some of them already knew that. I mean, that's what the cannonball

shooter was all about, was unwanted bycatch. So they kind of knew that and appreciated that. Now, that wasn't true, maybe, for all of them, but certainly Sinkey and the community around Darien and most of the folks, I think, who would use that jellyball shooter understood that and got that part of it.

SSD: Something interesting that I found out through the interviews is that jellyball is a delicacy in Japan.

MH: Yes. I knew that. It was a project at the Marine Extension Service there in Brunswick, and (Ya-Wen Lang?) was the researcher's name, and he experimented with drying some of those. This would have been about 1981, '82, maybe '83. It never really developed into a business in Georgia, but he dried some of the cannonball jellyfish and shipped them over there, I think, to see how they would be accepted in the food market.

SSD: Yes. Well, it seems like such a viable market that – and if it's that easy to catch them – I don't know, maybe they get damaged and smashed up in shrimp nets.

MH: Yes. I don't know what all the limiting factors are. Probably handling them and then having the facilities to dry them, and that kind of stuff might be part of the problem.

SSD: I guess if you don't dry them pretty quickly, they just aren't even edible.

MH: Yes. That's probably so.

SSD: But I will make a prediction that there's a market that's going to develop down the road for those.

MH: I wouldn't be surprised. [inaudible] practically everything else you can get out of the ocean [inaudible].

SSD: That's right. Well, can you just give us a little commentary on how early TED models compared to later models? If you were thinking a hundred years from now that this is the only description anybody will ever hear of the difference between the NMFS TED and the Sinkey Boone TED, then can you paint a picture for them?

MH: Yes. The NMFS TED was a collapsible device with fish excluders, and, in addition to the turtle grid, it had a little wire mesh that would help to encourage the fish to go out through the fish excluder holes. I think the long and the short of it – it was kind of a great device in a controlled setting, but it just wasn't accepted by the industry as being a practical TED that they could use, and I don't know that I ever – except for the ones that we gave away, I don't know that I ever saw one in actual use on a shrimp boat, whereas the Sinkey Boone TED was just a simple grid that obstructed the passage of anything too big to go between the bars getting into the net, and something like it – it might be a modification and not made out of the same material, either webbing or grid, but something like that is pretty much the standard kind of a thing now. So it's simple and

apparently more accepted and less likely to run into problems in actual use. So that's probably the best job I can do of trying to describe the differences. That's about it.

SSD: What do you mean by a controlled setting? You said the NMFS was created –

MH: Well, you know, they had worked on that at the lab and did various trials with it, so it wasn't a – the other thing I would – they were criticized by some in the shrimping industry in the early days, but even though that particular device did not turn out to be one of the ones that was really adopted, a lot of what they learned through the development and testing of that, I think, actually helped to influence the design of the other TEDs as well, so they were building the body of knowledge that helped us understand how those things had to work in whatever final configuration it would be.

SSD: Right. Well, I've heard some other people say that it could be downright dangerous on a small boat in rough weather. What do you think about that?

MH: Well, I heard that as well, and it certainly was bigger and heavier than a simple grid device, so I think there's probably some truth to that. This is not to take away from that comment, but in heavy weather, there are a lot of things that are dangerous on a shrimp boat, not to mention the doors and –

SSD: Oh, the doors of the trawl itself?

MH: Yes. And if a block becomes unfixed and is swinging – and that's not to take away from that comment, but fishing has – many parts of the gear can be dangerous under certain conditions. But it was bigger and bulkier than a simple TED, so obviously, it would be more likely to injure you if it bumped into you while it was swinging around.

SSD: I think we've probably covered seven, your experiences with protests.

MH: Yes.

SSD: You have touched on eight. I know that you have been involved in enforcing compliance regarding the use of TEDs because you mentioned doing training and going out with the Coast Guard for boardings. Is there anything else that comes to mind?

MH: No. One of the things we had to do was to train our law enforcement officers how to inspect and do boardings. Then, over the years, some of our staff, particularly Mark Dodd, who's our sea turtle coordinator now – he regularly goes out, and the Coast Guard folks change in our office. Our law enforcement officers move to other areas, and new ones are hired. Just like anything else, you have to have an ongoing program of training the people how to properly enforce the regulations. As we learned more about TEDs and learned that the angle at which the grid is installed is important in terms of how well it works and that that needs to be tested, but it needs to be done properly – so we've tried to stay engaged in that. Then the other thing we've done a few times is we've done courtesy boardings at the dock if the shrimper would allow us to go on the boat. They

could have their gear checked out before they went out and started fishing, maybe right before the season opened, just to make sure that everything was A-okay.

SSD: And if it wasn't, then were they exempt from any –

MH: Yes, they would not be cited or fined in any way, they would just be told what needed to be fixed, and for some of the shrimpers, the net shop actually installed the TED, and they may or may not do that themselves. So they're dependent on that net shop doing a proper job and following all the regulations. So the idea there was to have a proactive sort of an approach, but nothing substitutes for people actually going out in boats and doing boardings and just checking to make sure that people are – most of the folks are following the rules, but if nobody ever checks, there's always a possibility of a little bit of slippage on that.

SSD: Did you find that, in your work, in the beginning, maybe the penalties weren't as severe, and the penalties got more severe as people became more educated? Did you give them a little wiggle time upfront?

MH: My recollection – I would have to defer to the actual law enforcement folks on that. My job was more on the technical side of helping them do the inspection properly, and then it takes a long time for a case to work through the system once the initial inspection occurs and they're cited, but I think, for the most part, it was pretty consistent through time.

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

MH: I don't have hard numbers, but my sense is that it is improved, that people are less likely to intentionally modify them, like the gentlemen I mentioned in one of the early boardings that I saw that had actually totally disabled the TEDs in his nets. I don't think that that happens much anymore, and I think if there are problems now, they're minor adjustment kinds of issues that are probably not intentional, for the most part. You know, not to say there's not a few individuals out there, but overall my sense is that compliance is better now than in the early days.

SSD: Well, do you know how the enforcement of the use of TEDs has changed over the years?

MH: I think now we do a better job of really looking at the TED in terms of the angle at which the excluder bars are installed and do a more thorough job of making sure that the TED is constructed and installed properly. So it takes more time to do an inspection when you really look at all those kinds of things.

SSD: What would be a ballpark figure of the most time you think it would take, let's say, on a boat with four nets?

MH: It's probably going to take an hour at least to check all the parts using a little device to measure the angle and everything. That'd be my guess.

SSD: Is that the only thing that's being checked for?

MH: No. They're counting the meshes and looking at the size of the escape opening and several different characteristics of the TED.

SSD: Well, I mean, besides looking at the TED, is there anything else being checked?

MH: Typically, on the ones that I've been on, no. Now, certainly, the Coast Guard could do an inspection on any number of safety-related things, but when I've personally been out with them, it was pretty much just sticking to the TED.

SSD: Is there anything you'd like to add to how your agency engages with other agencies around enforcing TED usage?

MH: I would say one of the things that we did some early on was to have a coordinated effort at boarding where several of our state boats, as well as several Coast Guard boats, would go into an area simultaneously because one of the things you can observe is, as soon as one boat is boarded and they've hauled their gear back, and the inspection has started, some other boats just sort of filter out of the area, and I wouldn't say that's because they were in violation, but they just maybe didn't want to go through the experience and time of having somebody come on board and check them. So if you have a number of boats, you can do a better job of actually getting out and checking folks. So that was one of the techniques that we did early on was to have a coordinated effort involving multiple agencies.

SSD: How do you think TEDs have affected the shrimp industry?

MH: Wow, that's an interesting question. I think they've greatly – one of the effects has been a big reduction in the number of turtles that are killed incidentally and in the bycatch of other organisms. Some folks would maybe attribute TEDs to one factor (sic) in the decline of our shrimp industry, and I would argue that globalization and the imports of pond-raised shrimp is far more important in terms of the economic viability of our fisheries than TEDs. But certainly, they would have had some increase in cost because you have to buy them, and that would have been, or is an added cost to the shrimp fishery. But I think fuel expenses and the fact that shrimp prices are determined by the import market are probably the two most important things that have really hurt our industry.

SSD: Right. Yeah. It's interesting because we eat so much shrimp in the United States that there's no way domestic shrimpers could feed everybody who wants shrimp. And so that would put them in a good position, right, because they have a coveted commodity, right? They would get top dollar for their shrimp because –

MH: Well, you would think that would be the case, and one of the things that's been interesting to me – although there have been some attempts, with limited success, to market our wild-caught shrimp as a premier product, those have not been as successful as they might have been. And I don't really understand the reasons for that. That's kind of outside of my – but, I would say that's potentially still an avenue for the industry to benefit from, of, there does seem to be a growing interest in local-grown food that is ecologically produced, and in the right conditions, wild-caught shrimp using the right kind of gear would seem to qualify for that. So I think that effort is worth some additional research and looking into.

SSD: The shrimpers would have been in such a good position if the other markets around the world hadn't figured out how to mass-produce pond-raised shrimp and bring the prices down. It's too bad. Plus, I think people don't know about the potential health hazards of the shrimp that –

MH: Yes. I think that's true, that there's not a wide understanding of that.

SSD: For example, the antibiotics that are used because the pond-raised shrimp are so crowded that they wouldn't live to be marketed if they weren't pumped full of antibiotics, kind of like the feedlot cows. It's interesting what we subject the animals that we eat to.

MH: Yes, it is.

SSD: You've kind of touched on number thirteen, but just for the record, to get it on the record as a question, how have TEDs affected the sea turtle population?

MH: I think they've clearly had a beneficial effect on the turtles, which is not to say that there aren't other challenges and issues out there, but my opinion and assessment is that it has significantly reduced the incidental bycatch in shrimp trawls. I think if you look at the increasing of the Kemp's ridley population, that's a good indication of the benefits of TEDs, as well as other conservation management measures that we're taking. I know that the loggerhead population on the east coast of Florida now has started a dramatic decline in the last eight or ten years, which is – in the early days, up through really the late '90s, that population was increasing at a nice rate as well, and it has now turned around, and there's some thought that there are other fisheries on the high seas and in other areas that might be partly responsible for that.

SSD: That's going to be tough to enforce, isn't it, if they –?

MH: It will. It will.

SSD: Yeah. God, poor sea turtles. I'm on their side. [laughter]

MH: [laughter] Well, they're pretty cool animals, no doubt about it.

SSD: So up to the 1990s, the loggerheads were increasing, and then suddenly they started to decline?

MH: Well, suddenly – it's been over about the last eight to ten years. Now, that's on the east coast of Florida. Our turtles – and I'm talking about nesting females, now. I'm not talking about the in-the-water populations of juveniles or sub-adults. We have pretty extensive programs to document and count the number of nests, and that's our most rigorous way of assessing the population, but it only allows you to make any inferences about the adult female population. On our beaches, we've not seen that decline that they saw in Florida.

SSD: And we're talking about loggerheads still?

MH: Why the difference is a good question.

SSD: East coast of Florida, so not the Gulf.

MH: Right. But in my opinion and assessment, the TEDs have had a significant benefit for sea turtles, and I would hate to think what our populations would be like if we'd not had them over the last twenty-something years now, I guess, if you count the early days. Certainly, the early days were not as effective as they probably are now, in terms of the types of TEDs that were allowed then and other problems. But I don't think we could have any hope of recovering sea turtles without TEDs.

SSD: Something that we haven't put on the record in this interview – correct me if I'm wrong, but in the Gulf of Mexico – I'm not sure about the Atlantic coast, but in the Gulf of Mexico, the TEDs were put in in response to a reduction in the Kemp's ridleys. Was that true in the Atlantic also?

MH: We do have Kemp's ridley turtles, and one of the interesting things – you get these little quotes at meetings that people talk about, so 1987 there in Brunswick, the public hearing on the federal TED rule – one shrimper gets up, and he says, I don't catch very many of those turtles. I might catch one or two a year, and they're not loggerheads anyway; they're those little green turtles. And what he was talking about actually was not the green turtle species, but he was talking about Kemp's ridley turtles of the juvenile size. We have seen an increase in the number of those that wash up over time, but that's associated, I think, with the increase of the population. And rarely do they nest in Georgia. Occasionally we'll have a stray that will nest, but – we do have the juveniles and sub-adults foraging in our salt marsh and living that part of their life – presumably, they go back around when it's time to nest. But we do have some Kemp's ridleys.

SSD: Well, for the record, could you tell us a few differences in the Kemp's ridleys and the loggerheads?

MH: Well, size-wise, the loggerhead is much larger. The coloration is different. The shape of the carapace – pretty much they're just very different, and the numbers of scutes

and arrangement of scutes are different as well. But just the coloration and, usually, lack of barnacles and growths on the Kemp's is, most of the time, so obvious that – and just the general shape of the shell as well.

SSD: What's the biggest loggerhead, you think, that's maybe on record that you remember?

MH: Well, I've seen several males that were hundreds of pounds, as well as some big females, too. I don't know the exact biggest one that I saw, but (multiple conversations; inaudible) –

SSD: When compared to the Kemp's ridleys in terms of –

MH: Oh, the Kemp's that I've seen – the smaller juveniles and sub-adults – a lot of them were not much bigger than a big dinner plate.

SSD: So maybe a foot across?

MH: Yeah, or eighteen inches, something like that.

SSD: But the loggerhead could be, what, five feet across?

MH: No, not five, but three to three-and-a-half.

SSD: Three? Okay. It must be the leatherback that's the huge one.

MH: Yes. And we do have some of those in the spring.

SSD: So loggerhead really doesn't get so big that it wouldn't go through a Sinkey Boone TED.

MH: Well, one of the last modifications, I guess, was to try to make sure that exit hole was big enough that a large loggerhead could get out, and I think that also the idea was to have one that a leatherback could get out as well, which is of course much bigger than a loggerhead.

SSD: Huge. Yeah. I was talking to Sonny Morrison, and I think he maybe invented soft TED, but I'm not sure about that. But he mentioned it's no fun to have to lift a 300-pound loggerhead off your deck and get it back in the water, and that's a really interesting point of view compared to the shrimpers in the Gulf of Mexico who really don't have to deal with those big, big turtles, so I think that was probably one of the reasons in the difference in compliance. I think the East Coast shrimpers could see, this will help us in some way, so it's not a hole in the net that's going to have no benefit to us. Well, the fourteenth question is one that I added. It's just a kind of existential question. I was interested in finding out why various people think that sea turtles are important. So I guess it's your turn to tell me, why do you think –?

MH: For me, they're part of the community of wildlife that we have, and all of the species that we have, in my opinion, are important, and they represent a natural resource that we will not be able to replace if it's ever lost. So part of our mission as stewards is to maintain viable populations of all of the wildlife that we have. So I would give that as the first reason. And in particular for sea turtles, they're just cool animals. Their whole life history and how they make a living and everything is fascinating. The migrations that they make and their nesting behavior – it's really exciting to watch them nest, and that can be, in some cases, a benefit to local nature-based tourism-type economies. We have a good program on Jekyll Island that – the public is able to go, and if they're lucky, they get to see a loggerhead nest, and it's done in a way that doesn't adversely impact the turtles. They're carefully guided so that they don't disrupt the nesting. But that's a small part of their value, in my view. Their main value is just part of the wildlife resources that we have in our state and in our country, and I think we owe it to our future generations to make sure that they have the same opportunity to experience and enjoy what we have and that we don't leave them a depauperate suite of species if you will.

SSD: That's very well said. I did some research before I started the interviews – had to do twenty-five interviews for the Maritime Museum – and watched some videos of people scuba diving and snorkeling with the turtles, and they seem to have no natural fear of people. They either just ignore them or get a little curious about them. I saw one of them – I think this guy had some metal weight belts on his scuba gear, and one of the turtles kept coming to the flash of the metal, I think, was what it was after. It was maybe a little silverfish or something. Yeah, they really are fascinating. And I think I read somewhere that the only time they leave the sea is to nest, so the males don't usually come ashore. So they're air-breathing –

MH: Air-breathing reptiles, yes.

SSD: Yeah, who spend their whole lives in the water once they leave the beaches if they're male.

MH: That's right.

SSD: They really are beautiful to watch. Well, do you know currently, just for the record, ballpark average (b-flat?) penalty for netting a sea turtle?

MH: No, I do not. The federal penalties would be for violation of the Endangered Species Act, and I think those can go up to twenty-five thousand dollars or something. That's just kind of my – I have a faint memory of that number. I don't know that that would actually be what would be likely to be imposed. For our state regulation, I think that would be a misdemeanor, and I believe those can go up to a thousand dollars for a misdemeanor violation of wildlife –

SSD: Yeah. Well, now, if we had been interviewing you strictly for the Center for Oral History, where I work, we would have started with the sixteenth question because we'd

like to get some background information, and because, in hundreds of years from now, what seems very ordinary today will be of interest to people. So if you have time, and you're willing to, can you tell me a little bit about how you grew up, where you grew up, what it was like?

MH: I'll do that. My family moved to Savannah, Georgia, in 1960, I believe it was when I was in the first grade. So I grew up there and spent time fishing and crabbing in the tidal creeks and everything. I guess that helped to generate a love of the coastal marshes and barrier islands, and I went to school at the University of Georgia, majored in wildlife, and after I graduated, I moved to Brunswick, Georgia, and that was really when I became – I worked at the Marine Extension Service before I worked for the State of Georgia, and there were a number of former shrimpers, some of whom went back to shrimping after they had worked on – they had a research vessel there, a shrimp boat, that we were doing research projects on. So that was one of the places that I became exposed to the part of the culture of the shrimping industry. One other person that you needed to have interviewed for this was Dave Harrington, who passed away a few years ago. He was there. You might have heard his name from other folks.

SSD: Yes, I have.

MH: But Dave was a fascinating guy that did a lot of stuff that really helped out our shrimping fleet there in Georgia. And he was very involved in the whole TED – more from the shrimpers' side than the side of the turtles, but he was a reasonable person and a lot of fun to work with.

SSD: Well, why did you choose your career path?

MH: Well, I enjoyed being outside and working with wildlife and biology, and that was what I wanted to do, and I've had many interesting opportunities over the years to work with a lot of different fascinating critters. So I guess I've been very fortunate in that regard.

SSD: What is your current position?

MH: I'm the chief of what we call the Nongame Conservation Section of the Wildlife Resources Division in Georgia Department of Natural Resources, so the part of Wildlife Resources that I manage is the part that looks after endangered species and all of the wildlife that you don't hunt or fish for. So at the state level, the folks that I work with have responsibility for conserving species like sea turtles and right whales and wood storks and eagles and really all of the kind of fascinating critters that we have. So trying to keep all of these critters around for the future is really what we're all about, and we have folks on a day-to-day basis working on everything from reptiles and amphibians to birds to rare plants to whales and turtles and all in between.

SSD: How does an animal get on the list?

MH: Well, it's not something that you hunt or fish for legally – a game animal or sport fish – then it falls into our category as non-game wildlife, and that's probably ninety to ninety-five percent of all the species, depending on how many invertebrates you want to count on the list, and then we certainly can't do things with all of those species, so we have a state-protected wildlife list that's the state equivalent of the federal endangered species list, and we do work with a lot of the species that are on that list. We also have something called a State Wildlife Action Plan. We started in 2003 working on a program to develop a conservation plan for all of the wildlife that might be imperiled in Georgia, and so we have about 296 species that are on that list, mostly vertebrates, but a significant number of freshwater and mussels and crayfish in the invertebrate world that are on there, and so we are implementing a range of conservation actions and plans to help save all those species, everything from acquiring important habitats, managing the habitat properly with prescribed fire, whatever other kinds of management, doing surveys and research projects and, in some cases, dealing with incidental mortality from otherwise legal activities like shrimping or the bycatch in the [inaudible] fishery or that kind of thing.

SSD: My next question was, what kinds of things put them in peril?

MH: Habitat is the main thing.

SSD: Loss of habitat?

MH: Loss or degradation of habitat is the single biggest factor that affects those species overall. But that's not to say that there aren't particular things like the sea turtle/shrimp fishery interaction, or – there's been a growing market to catch freshwater turtles and export them to China for the food market.

SSD: Oh, my God. I can't stand it.

MH: While most of those species are still relatively abundant, they certainly cannot support an unregulated heavy-duty harvest. So we do have some of those kinds of issues, too.

SSD: God. I've never heard anybody talk about exporting turtles to China before. That just really makes me almost sick. I saw a documentary on television, and it showed a Chinese market, and there were buckets – I mean, big tubs, like bigger than whiskey tubs – of turtles for yards and yards and yards, and they were all going to be eaten, and I looked at them, and I thought, "That's not sustainable."

MH: Right. Right. Well, most of the states have been moving to somehow regulate that harvest. Florida just implemented a program that we're fixing to – our legislature passed a law this year, as a matter of fact, that will allow us to have some regulation of that commercial harvest. So we'll be working on that over the next few months.

SSD: Really, it sounds to me like the United States is one of a handful of countries who will be the true stewards of wildlife in the world because there's so many hungry people in other countries that those hungry people can't afford to be stewards. I'm just so glad that the United States is doing that because look at the impact we've had on turtles. We're probably just one of maybe, I don't know, eight countries who care, and some of those countries are pulling TEDs because the United States says, "We're not going to import what you want to sell if you don't pull TEDs." I mean, can you imagine if the United States hadn't done that, how soon we'd be out of wild animals?

MH: Yes, I definitely can.

SSD: Then, of course, where next? [laughter] Because something will wipe out the domestic animals, and there won't be anything for us to eat but tofu, which is fine; I like tofu. But it's crazy because I think we're on a path of self-destruction. Well, I'm breaking the interviewer's rule. I'm not supposed to be putting my opinion on here. But can you just tell us what a typical day of work is like for you?

MH: Well, what I do now mostly is actually administration, managing budgets, helping to develop new projects and get new sources of funding, and reviewing different kinds of proposals, so I'm more in the administration level as my day-to-day kinds of activities.

SSD: What kinds of sources do you find for funding?

MH: Well, the interesting part about our work unit is, we don't get any state general revenue. There's no state tax dollars that go into the Nongame Conservation Section. We get money from a wildlife license plate that people can buy voluntarily to put on their car with an eagle or a hummingbird. We get money from an income tax checkoff. Most of the states have those, so you can make a donation there. Then, we have this thing called the Weekend for Wildlife. It's an annual fundraising event. We do that at Sea Island near Brunswick each February [inaudible].

SSD: Wow. Can you tell me about that?

MH: Well, it starts on Friday and lasts until Sunday morning, and we have about four-hundred people, and they come in and have sort of a cocktail reception Friday night, and then Saturday we take them on trips up and down the coast to barrier islands and places that they would normally not be able to visit because they're privately owned and sort of secluded. Then, Saturday night, we have a big verbal auction and a silent auction, and the governor normally attends, and he helps to get people enthused in the auction. That's one of our major sources of funding. Then, of course, we go after various federal grant programs or other opportunities to [inaudible].

SSD: Foundation.

MH: Yes, foundation.

SSD: Is there a lot of federal money out there?

MH: There's a fair amount. The State Wildlife Grant Program is our biggest source of federal money, and that's the program that helped us develop that State Wildlife Action Plan and that is really focused on conserving these species before they decline to the point that they are eligible for federal listing as threatened or endangered. Instead of waiting until then and having all the conflicts and issues that can come about with a federally protected species, the idea is we can begin conservation work sooner and avoid some of the conflicts that come about with that, and I think that's a good approach, but conservation does take money, and it also takes a good bit of time to restore species. It's not something you can do in two or three years.

SSD: Right. It takes people who are educated, I guess, at least in some kinds of basic biology or maybe even – what is the study of flora?

MH: Botany.

SSD: Botany, yes. Well, is there anything that you'd like to put on the record or be willing to put on the record about oil spills? We have one in the Gulf of Mexico right now, and I think it's going to be really bad for the living marine resources out there. They're putting a dispersant out that my husband just heard yesterday is toxic. We've had many, many sea turtles – I think the ones I saw were Kemp's ridleys – that are washing up in Bay St. Louis and Pass Christian, Gulfport. Is there anything you'd like to say about that?

MH: No, not really. I'm very concerned about that. Everybody in conservation is, and we're all just waiting to see how it's going to work out, and it is really a terrible, terrible thing.

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

MH: No, I think we've covered pretty much all of the areas of this that I would have any comments to make. One of the people you might want to talk to is Lindsey Parker at the Marine –

SSD: I did.

MH: Well, Lindsey is an old friend of mine, and I worked on the *Bulldog* there with him back a long, long time ago, and they did a lot of testing of various TEDs in the early days and I'm sure he has a lot of opinions about those. And Chuck Oravetz.

SSD: I did. I talked to him.

MH: Talked to Chuck. And Terry Henwood. Terry was one of the guys that worked with Chuck, and one of the foundational papers that really helped to document the extent

of the problem was his doctoral thesis, I think, when that was published. Terry's probably retired now. He was at the Pascagoula Lab – is where he was working the last time that I knew him. But he would be an important person to talk to, I think, for this project as well. You talked to Sally, already, I think [inaudible]

SSD: Sally Murphy, yes.

MH: Barbara Schroeder. I don't know if you've talked with her, but she would also be a key person. She's still with the National Marine Fisheries Service, still working on turtle conservation. But she was a critical – she was actually working for the State of Florida during the early days, at the TED program.

SSD: I have very little choice in who I could interview. This is funded by a grant, and I think a woman named Kiki [Lekelia] Jenkins, who I have not met, had a lot to do with writing the grant, and so the grant writers had a list of possible people to interview, and I'm not sure if Terry Henwood's on there or not. I'm going to look now and see. But it's the shortlist, right? So if he made the shortlist, then maybe I can call him. I do want to thank you so much for taking time to talk to me today. I want to let you know that I will be sending you a CD of the interview for posterity. I have that address that's on your email. Is that where I should send it?

MH: Yes, that's right. Yeah. Will there be a report or any kind of a written synthesis of this in the end? What's the final – in addition to the recorded interviews, is there a summary of some kind that –

SSD: I don't know what the museum's planning to do with it, and I don't know if Kiki Jenkins is going to do anything with it. I think she's in Maryland. I do need to talk to her when I get all the interviews done to see if she has new plans for them. What we have historically done at the Center for Oral History is transcribe interviews and bind them and then put them on our website, but money for transcription has dried up, so we're not able to transcribe them anymore. So I am writing abstracts of the interviews. I don't know what will be done with the abstracts. I know they're going on our server. We're working really hard to get all of our interviews online. The Center started in the '70s before we had websites and before we even had computers, so they're not all even in electronic print form. So I don't know. I mean, down the line, I hope somebody will take them and have a museum exhibit, and photographs and buttons you can push and actually hear people's voices, but right now, all I really know for sure is that we will archive the audio, and we will archive the abstract. The museum itself, down in Biloxi, was completely destroyed by Katrina.

MH: Yeah. That was terrible. Now, where do you live?

SSD: I'm in Hattiesburg, which is about sixty miles. You know what? Let me go ahead and turn this recorder off.

-----END OF INTERVIEW-----

Reviewed by Molly Graham 7/25/2021