Michael Jepson: This is Michael Jepson with National Marine Fisheries Service, Southeast Regional Office. I am here with Gary Graham. We are doing an interview with him as part of the voices from the fisheries program. Gary, thank you for doing this interview, appreciate that. We just kind of want you to talk a little bit about your background, first of all. Could you state your full name and where you presently reside?

Gary Graham: Sure. I'm Gary Graham. I live in a rural area in West Columbia, Texas, down on the San Bernard River.

MJ: When were you born?

GG: I was born in May 31st, 1946.

MJ: Where was that?

GG: In Wharton, Texas.

MJ: In Wharton, Texas?

GG: Yes.

MJ: Are you married?

GG: I am with Candy Graham.

MJ: Candy. For how long?

GG: Candy and I have been together since high school sweethearts.

MJ: Really?

GG: Yes.

MJ: Quite a while.

GG: Yes.

MJ: Tell me a little bit about your mother and your father. What were their names? What was your father's occupation? Did your mother work?

GG: My father lived a very interesting life. He's been dead for a number of years. He died in 1964. He worked as a superintendent of a camp that sent oil to the Mediterranean Ocean from the Persian Gulf and Saudi Arabia. Part of my life was in Saudi Arabia. My daddy was the superintendent at that camp. They had a number of compressors scattered across the desert to move this oil through this huge pipeline.

MJ: Wow.

GG: And so, seven years of my life was actually in the middle of the desert. My parents lived over much longer.

MJ: How old were you then?

GG: From four until eleven for me.

MJ: What do you remember about that?

GG: I remember a lot. I can remember quite a bit of the stuff. We had lots of adventures, believe it or not. We drove Camel Trails one time through Iraq until we hit a tarvy road, a paved road, and drove to Baghdad. We took an extra gas tank in our car. We drove across the desert and went into Jordan. At that time, Jordanian Jerusalem and so many stuff.

MJ: Did your father speak the languages?

GG: Actually, I went to school with him there as a kid. He did special training in Arabic. I don't speak much. I still can remember a little bit. But he spoke some.

MJ: That is something. When did they come to Texas or back to Texas?

GG: They came back to Texas, I would think, somewhere around 1961. Somewhere around in there.

MJ: Did your mother work?

GG: No. She did later on, after my father deceased. Then yes, she did. She worked as a receptionist at a tax appraisal district in Brazoria County. But while they were married, she didn't.

MJ: Are both deceased now?

GG: Both are deceased.

MJ: Do you have any brothers and sisters?

GG: I have a brother, Gregory, that's ten years younger than I. He was born in Beirut, Lebanon.

MJ: He was?

GG: Yes.

MJ: How did you become interested in the marine environment?

GG: It was really a roundabout way. I started off all through high school, had an interesting experience there. I worked on a ranch and actually had some responsibility in high school. One of the largest ranchers in the area there, (Rick?) took a liking to me. He was an elderly gentleman. He even provided me an old car to drive back and forth to the ranch and paid me $7.50 a day and build hay. We worked cattle, built fence, and this sort of thing. I worked summers to the point to that's what I wanted to do. I wanted to be a cowboy. There you go. I wanted to raise cattle and do that. I went to Texas A&M with the idea of range management.

MJ: That is what your degree was, right?

GG: Yes, right. I wanted to manage grasslands in Bureau of Land Management. That was really my goal there. Being that I was in Saudi Arabia, I was kind of raised alone. I thought that was a good way for me [laughter] and don't get me wrong. You know I'm a…

MJ: You're a sociable person.

GG: Yes, I'm a sociable person. But that was my goal. What had happened was, is I was dating Candy. She had a father that is really a different kind of guy. He'd gone to Princeton. He had a shrimp vessel. At that time, they got the largest shrimp boat in the Gulf of Mexico at the time. He taken an old boat from the 1950s and converted it to a shrimp vessel. He calls it (*Gust-3*?). He had worked for the government for a number of years. Back then Bureau of Commercial Fisheries at least had vessel for research.

MJ: Oh, they did?

GG: Yes. The contracts pretty much played out and therefore, periods of time, he goes shrimping. I started working for him in college. I went out on the vessels and just fell in love with water, fell in love with the shrimping. He was continually experimenting with gear. I've learned a lot from him. I guess it's still there because that's what I do a lot. In fact, I thought that, with you, the way shrimping operated is when you picked your nets up and you dumped them. You kept everything sorted. You wait each net and all that. Well, no, that's not how it works. [laughter] But he was always experimenting and wanting to know exactly what he was catching and what this change would do in these sorts of things.

MJ: So, he was applying a science to his shrimping.

GG: He was. He really was.

MJ: What kind of net did he use for that vessel, and how many nets?

GG: To be honest with you, it was very unusual. We put three nets on that boat.

MJ: Really?

GG: We had an A-frame on the back. We had two nets out on the side and then had A-frame on the back. Some of the stuff that we did back in those days, the outriggers were never long

enough. If we put the center net forward, it would catch more than the two outside nets because it robbed them, and vice versa put in the back. But we continue to think that it probably paid off pulling three nets. But in those years, majority of the fleet pull two nets, one on each side. It was in that period, as I got older, when we started trying to pull four nets, which are now part of the fishery. But we had a tremendous amount of trouble trying to make that thing work in the early days. To even make it more complex, my father-in-law had gotten involved with the electric tickler chain.

MJ: Electric tickler chains?

GG: Electric tickler chain, and it worked. It actually sent a shock through the water and kicked the shrimp out. We were catching brown shrimp, which normally you never catch brown shrimp during the day, they burrow. We were able to kick them out in a day with that electric tickler chain. So, then we thought, "Well, this is working. Why don't we go to four nets and really do something?" We would get things tangled up in like these electric tickler chains had all these arrays. It was the biggest mess you've ever seen. But that was kind of work we did. Quite frankly, it will probably work today. I've just never pushed it because of the fact that I just don't know if the shrimp fishery wants that, if they want to handle that.

MJ: So, he was kind of an innovator?

GG: Very much an innovator.

MJ: Did he fish with other shrimpers at that time?

GG: Yes. He had a big reputation and great reputation.

MJ: What was his name again?

GG: (Jim McMurray?).

MJ: Jim McMurray.

GG: Jim McMurray. Actually, I would come and fish in the summers with him in college. I was making so much money. I don't want to go back to college. [laughter] It is ridiculous. He said, "No, you're going to college. You're not going to work for me. You're going to go to college." He insisted I do that. I graduated and did some time in the service and then came back and started shrimping.

MJ: You started shrimping where?

GG: At the Freeport, Texas.

MJ: At the Freeport, and with who? Did you have your own boat?

GG: I did not, at that time, have my own boat. That was in my sights. Candy pretty much told

me and said, "Look, I never had a father. He was on the ocean all those years. I'm complaining on having a husband." [laughter] And so, I didn't hide this job. They need somebody at A&M with some experience, with the degree, and I just started out.

MJ: But then what job was that?

GG: I actually started out, they were farming shrimp.

MJ: Oh, really?

GG: In Brazoria County. It's one of the first shrimp farms going. They needed some labor [laughter]. I went to work as just as an assistant. But I've learned that they needed, at that time, gravid shrimp, pregnant shrimp to bring in and bring the eggs in and hatch them and raise them to start the farms. I had some knowledge about where the shrimp were. They were gravid brown shrimp. Later on, I really worked hard on trying to figure out white shrimp, gravid white shrimp. At that time, nobody knew how to do it, and I didn't either. One of the interesting things was is I got on some boats and I went out to make two- to three-week trips with them during the white shrimp season, when the shrimp were gravid, trying to get one that was actually fertilized and couldn't do it. I could find and catch them with eggs. But what we found out was and what finally happened was, the guys I worked with were very honest. It's against the law in Texas to fish white shrimp at night in state waters. So, we dropped the anchor. We come to find out what happens is the white shrimp breeds right after the sun goes down.

MJ: Oh, really?

GG: After I got some permits, I was able to break the code on the white shrimp and actually catch them and bring them in.

MJ: Was it between when you were – when you graduated and got the job at Texas A&M?

GG: It was several years, yes.

MJ: You were shrimping in between that time?

GG: Yes, I did. I was in the National Guard. I went off and did six months in active duty to the National Guard and was on shrimp boats and doing stuff. They came to me and said, "Hey, we're looking for somebody."

MJ: In your early job was on a shrimp boat, were you on the back deck? Were you a rig man or…

GG: I was a rig man then.

MJ: A rig man?

GG: A rig man, and I was ready to start running a boat. I did later on, but some. But I was a rig

man, yes.

MJ: And so, when you got to Texas A&M, did they have a research vessel that you had to use, or were you basically getting on commercial boats?

GG: No, and that's really important to me, that question, because I have had this philosophy for over forty years. It always amazed me ten or fifteen years ago when we really started directing our sites towards cooperative research. I have always felt that the type of work that I do that has applied research that if it's worth doing, an industry person will work with you on that. You get the right kind of industry person. They'll go along with you, and if you get some funding to help. Bottom longline tilefish 1976, I had a captain give me his boat, but at winter and I had to pay for the fuel. We went out, and of course, his family members went along, too. They were interested. But he gave me his boat for the winter to go out. It was a nice boat to go out in bottom longline and study tilefish.

MJ: There probably were not too many bottom longliners those days.

GG: No, it was the first one that ever hit that that I know of everyone to be in.

MJ: What did you do when you were out? What were you trying to accomplish with that research?

GG: Trying to see if there was a fishery. If there was a substantial number of fish that could be harvested in order to get a different fishery going, and there was. We caught a good numbers of fish in the market. We just never had the right market in Texas for tilefish. Now, it's there. But back on those days, it wasn't there.

MJ: Tilefish is good. I like that.

GG: The first load of swordfish we brought in 1979 almost rotted on the boat trying to get to market, trying to get them.

MJ: So, when you say the first load of swordfish, what were you doing with that fishery at the time?

GG: I went out to see if we had a stock of swordfish that could be harvested. I took some bait, really kind of a crude set up on a boat to go out and see. By golly, we found some and caught them and brought them in and nobody in Texas knew much about swordfish. The next year, we got our markets. It's not just harvesting a product. You've got to find a market for it. It sounds a little crazy now. But honest to goodness, we didn't know what to do with them. We came in, nobody bought them.

MJ: So, when you did this, would you take a crew with you of other researchers or with you with the commercial…

GG: Just me and the commercial man.

MJ: The commercial guys?

GG: Yes. The Gulf and South Atlantic Fisheries Foundation actually provided support for that.

MJ: So, you have that association with it.

GG: A long time.

MJ: Quite a while.

GG: A long time. You got to understand that the shrimp industry was flourishing in the [19]70s. There was a lot of boats. There was a lot of color. A lot of our fishery was down in Mexico. We had boats. I never forget when the law of the sea came in, in Mexico. The country started going to a territorial sea at 200-mile economic zone. Our boats had to come back out of Mexico. Some fisheries really thought they were going to benefit from this, whereas shrimp fishery, we had all these boats that were not in U.S. waters. We had fishermen that came to me and said, "Look, I don't know how to fish. I'm a good shrimper, but I don't know how to fish in U.S. waters."

MJ: Really?

GG: I spent all my life down in Mexico. There was a panic because all of these boats pouring back, and we just didn't think there was a resource there. Of course, the government was trying to build a fishery, so that was a period of time for fisheries development. That's where the swordfish and stuff. We were looking for other avenues to build fisheries.

MJ: So, that was your first job in kind of marine advising?

GG: Yes, marine advisory. I started out as a marine advisory program assistant, I think it was my title. They then said, "We want to get into the –" I was working in the shrimp ponds. I said, "We need to get out and then start doing some efforts with the shrimp fishery – commercial shrimp fishery." But they talked to me about it. I said, "Yes, I'll give it a whirl." They offered me a little job. I transferred and started trying to do outreach with a fisherman. Boy, they didn't know who in the world I was or what I was all about. Majority of them thought I was some kind of game warden that was only kind of [laughter] people that – and that was in seventy two. I started a project. It was very unique for me. That probably where I built my career on. That was, in those days, we had this ancient type of navigation called LORAN-A. I want to tell you, when I first started shrimping, we were using sextants.

MJ: Really?

GG: Yes, sir.

MJ: Wow.

GG: Sextants. They were taking shots with sextants. My dad-in-law used the sextant, and an old (depth?) recorder. We would sometimes drop buoys and fish back and forth with lights at night, stuff like that, on the bottom, try to avoid rocks and stuff. But LORAN-A came out. These huge units. The fishermen really, really, really caught on to this. It was really great for them. Not very good accuracy, but it was better than what we had. Fishermen began recording areas where they would lose a net. There's all kinds of stuff on the seafloor. So, each little fisherman started writing down his location. So, if he was in there, he had to look it up, and he had to avoid it. It was poorly organized. Most of the books, they would mark on a chart and stuff and try to figure out what the numbers were. What I did was, my really first success after the gravid shrimp efforts was to ask fishermen to give me the readings. They didn't want to do that at first. I said, "Let me have your numbers, and I'm going to make this catalog." They said, "There's no way that you're going to have all the numbers sent." Finally, a couple of guys like Hollis Forrester and some of the old-time fishermen trusted me and said, Here, take these." So, I would take all Hollis' numbers and I'd go see another highliner big fisherman and say, "I'll give you Hollis Forrester's numbers if you'll give me your numbers." [laughter] I would just took hours writing numbers down. I developed this catalog, a book, that worked like an Atlas, that had these readings in it. It just snowballed and there's a big demand for that.

MJ: I remember. I've seen that catalog. I remember people talking about that.

GG: I was on the boat just last fall. There was that old book. The last one I published was still up in the wheelhouse. It transitioned from LORAN-A to LORAN-C. When GPS came out, there was no longer a need for it. I backed off. But that was a big project for me and very popular. I had something like eleven or 12,000 obstructions identified from the Brownsville at the mouth of Mississippi River.

MJ: Wow. So, your early career was spent mainly in Texas, or were you spilling over into Louisiana?

GG: No. Actually, you see, when I started doing this work, I started going over Louisiana and asking those fishermen. Mainly, they would come to Texas. I'd see a Louisiana boat, and I run over and talk to him. But I started easing over to Louisiana too and collected data from those guys because –

MJ: You said that Louisiana boats were coming over. Today, we had the Texas closure. It's a very regulated opening and things like that, but it probably was not like that in early days. These guys were probably migrating.

GG: No. There was always a Texas closure. Texas closed their waters back in those days.

MJ: Oh, they did?

GG: State waters.

MJ: State waters.

GG: In 1981, yes, my years are right. I think [19]81 was our first federal closure. But we always had a state closure.

MJ: But that is because these boats were moving around all over the Gulf.

GG: That's right. Yes, all over the Gulf.

MJ: Were Florida boats coming over?

GG: Absolutely, huge fleets of Florida boats. The singleton fleets were in Freeport. There were huge fish houses, few that were – yes, the Florida boats were really, really coming. Freeport was important port for those guys at the time.

MJ: Freeport was a pretty big shrimp business at that time.

GG: Yes. At that time, it was. Yes. I think there were eleven fish houses in Freeport at that time. I think there's one now.

MJ: One. That is a big change.

GG: Yes.

MJ: A lot of things had happened throughout your career, but it made me think about the Vietnamese coming into the fisheries. That had to be a big change when they came in into the shrimp fishery.

GG: It was a big change. There was a lot of fear, I think. People were really worried about the fishery already having too many people in it. I actually served on a committee with the Department of Justice on the relocation.

MJ: This was about what time?

GG: Oh, man, that would be around late [19]70s.

MJ: Late [19]70s?

GG: Yes. Late [19]70s. We were trying to have educational programs to try to tell them about rules and stuff like that. I actually rode in some boats that had bullet holes.

MJ: Really?

GG: From shots that were exchanged.

MJ: From shots that were fired then.

GG: Yes.

MJ: There was a famous case, I think.

GG: That was a famous case, and it was down in Seadrift. I knew the person.

MJ: Oh, you did?

GG: Yes. That was very unfortunate.

MJ: When the Vietnamese came in, were they in state waters, primarily?

GG: Primarily, in state. Believe it or not, the Vietnamese, they started to go out outside, but Vietnamese like to stay near shore. They are the white shrimp resource. So, majority of the Vietnamese will fish white shrimp. Our Vietnamese, they're starting to do it because they have to. But you start getting out into brown shrimp grounds off Texas. You get into some really, really muddy, soupy bottom that a net can bog up in. You really got to know how to adjust your nets and stuff. The Vietnamese, they've always been, I think, a little intimidated by that deeper water in that area.

MJ: Was that a challenge for you in your role as a marine adviser, trying to work with that community, or did they even want to have that kind of community?

GG: No. Right off the bat, we got our foot in the door. One of the things that we found is, at that time, was to go to the Catholic Church and talk to the priest and say, "We have got an issue that fishermen need to know about. We would like to even pay if we had a grant or something to somebody translate. We would ask you to please, can you help us get to fishermen together?" The Vietnamese priest would do that. We have some enormous turnouts in meetings. We would bring in interpreter, and we still do. But that's one of the ways we did it. You have to learn certain skills in outreach. One of the things that I learned was, I do work in Florida on the Patriot Fishery. I plan to be over there during the full moon because there's more fishermen importing shrimp. Shrimping is not as good in the full moon, so you catch more fishermen if you schedule that. My idea with the Vietnamese was Chinese New Year. By golly, they're all going to be in here. I do not have some meetings because everybody is going to come in from China. You don't do that because nobody is going to come to the meeting. Vietnamese won't come to the meeting in the Chinese New Year and little things like that.

MJ: Oh, it's interesting.

GG: We're trying to get something done in Louisiana during Mardi Gras. But that was one of the tricks that I found out. Now, we have these really beautiful people that in the Asian American community that are real leaders. The port office, they got their own shrimp association. I just got a brochure where they're having some educational meetings with the Coast Guard up there next month. But some of these people are natural leaders. We still use the churches, but there are other folks there too that are leaders that we can get and say, "There is an issue."

MJ: Have they been more accepted into the communities, what they look like?

GG: Yes, absolutely. There has been a huge change since those times.

MJ: I think I remember watching a Texas A&M football game. They had a famous linebacker named Nguyen.

GG: That's right.

MJ: When I saw that, I said, "I think they're getting more accepted."

GG: Dat Nguyen. Yes, Dat Nguyen. It sure did. More accepted and – yes.

MJ: There is another issue I want to talk about that was a little bit controversial, and that is when TEDs were introduced in [inaudible].

GG: That was a rough time in my life. It really was. Thank God, I had done that handbook. So, many people knew me. I had made a name when people knew me. I'd been on their boats. I created a lot of friendships and relationships with the industry. The first TEDs that came out were designed by National Marine Fisheries Service. They were quite large. They were a difficult thing to sell. They were just really big. I'm going to tell you that, for the most part, they worked.

MJ: They did work.

GG: For the most part, they did work.

MJ: What about losing shrimp, did they?

GG: No. [laughter] Everybody said they lost shrimp. They had a trapdoor that came open, and a lot of that had to do with tension. So, I got to be careful with that. But I can tell you that I made a twenty-one-day trip, or twenty-one days on a boat, where I had swapped sides and I compared the (NMFS?) TED to (naked net?). There was a smaller boat. It's the Sea Tiger. There wasn't a difference.

MJ: There was no difference.

GG: But now, you got to understand, that was clean fishing. A few months after that, I went up to Port Arthur. There was a lot of Sargassum seaweed. I'll never forget. I got on a boat up there with a fisherman. We couldn't make it work because of the seaweed and couldn't do it. But on clean bottom, the gear pretty much worked, but it was very big, very heavy. Fishermen just did not really want to do that.

MJ: I want to ask you before we go too far on this. Because I was in Bayou La Batre, Alabama, in 1985 that summer, I talked to a lot of fishermen and not one fisherman mentioned TEDs. The next summer, in [19]86, I believe, it all blew up.

GG: It blew up.

MJ: It made me wonder, was there a communication problem there if they did not know this was coming, or was it just the TEDs…

GG: It certainly was being discussed a lot.

MJ: It was.

GG: I can remember in the early [19]80s, even the issue was up. I can remember being in a Gulf States Marine Fisheries Commission meeting and having some of the Louisiana leaders of fishermen and stuff getting up and complain, "What are the issues about the sea turtles?" I have always felt this very strongly. Number one, we didn't see that many sea turtles because there weren't that many sea turtles. Hence, we didn't think he had a problem. Number two, a lot of the Texas fleet fishes in deep water on brown shrimp. We updated and even confirmed this, that you don't probably have as many sea turtles out in the deeper water and stuff. So, there were some issues there. There was a lot of people that just didn't believe that there was a real problem. This was all a government conspiracy. There was a lot of fear. All of these devices are going to just put us out of business. People were feeding off each other's anger and fear. It became quite up as well. I know it was quite an issue.

MJ: You said that it was a rough time for you.

GG: It was.

MJ: Because you were out there in the forefront trying to introduce this technology?

GG: I was trying to show people, trying to introduce it. There was a lot of anger. There was some civil disobedience.

MJ: Well, they blockaded ports.

GG: They blockaded ports. I'm here to tell you I actually probably one of the few people that got past the blockade in Freeport, Texas. They put the blockade up. My kids were young, and I promised to take them fishing offshore. I pulled up the boat and I said, "Listen, I'm going to take my kids fishing." They said, [laughter] "Get out of here."

MJ: They knew you. [laughter]

GG: They knew me. But I went offshore that day and got back in. But it was rough. It was a bad time.

MJ: I was in Port Aransas. I believe it is Port Aransas that day.

GG: It had a huge barricade.

MJ: Huge barricade. It looked like a war zone. Helicopters. Coast Guard flying over. They had boats running through there. They were shooting fire hoses. It was amazing.

GG: Yes, it was. There's a lot of stuff that I think we've lost in history. There was really some negotiations that took place and some agreements, and a lot of people forget this. But there was a professional mediator brought in. I think he was from Alaska and sat down with the environmental groups in the industry. The Texas people actually they signed off. They made a compromise and agreement that TEDs will only be used – I think, it was up to ten miles and then up to fifteen miles, or something like that. They signed off on it, and then a backlash. Some of the people came back and said, "We don't want this. We're not going to have this," and voted to withdraw the signature on the agreement.

MJ: Was that the Louisiana group?

GG: No, it was actually Texas.

MJ. Texas?

GG: Yes.

MJ: The association did. That was some of the darker years and created a lot of problems there. But yes, there was an agreement. The deep water wasn't even included. We weren't supposed to use TEDs in the deep water at that time. I always thought that was interesting.

MJ: Yes, it was. So, we kind of moved on, and TEDs are out there. There's been a lot of improvements made there.

GG: That was it. I'd never forget I was in New Orleans around [19]86 or so, and me with some environmentalists had a very nice meeting there. I never forget we were talking about, I said, "I think that industry is pulling a turtle excluder device, they just don't know it," and – or some of the industry was. Matagorda Bay has reputation of just harboring huge quantities of cabbagehead jellyfish, where you can't pull the trawl at certain times. Our guys had rigged up some devices that has had in Georgia. Devices they put in the nets to exclude jellyfish – cannonball jellyfish. It was always my thought, "I believe these things probably get rid of the sea turtle." Dave Harrington, one of my cohorts over in Georgia, most definitely think – because they had more turtles over there. They knew they were getting rid of turtles, where I could never – the loggerhead population over there were enough turtles. They could see that there was – something was happening with this gear. I'd be quite frank with you, that was probably – when Dave Harrington and some of us got together and said, "Hey, let's just see if these devices will work on sea turtles." That's when the big breakthrough took place. They got the funding for the Georgia Bulldogs.

MJ: Tell us again who Dave was.

GG: Dave Harrington was my counterpart in Georgia. He was also one of my mentors. He was

older than I am. He actually rode a boat with my father-in-law for the government. He got twenty at least out, that was our connection. I'd never forget Dave got some funding. We kicked in a little bit. We took some of the industry ideas. Louisiana even had a cannonball shooter, cabbagehead shooter over there. That was one of the tough, radical guys who actually had designed it. He said, "Well, go, take it, and see if it will work." That was (CJ Keith?), good man.

MJ: CJ Keith.

GG: CJ Keith. He had a BRD, even from Louisiana. Not a lot of people don't realize that Louisiana had a dog in the hunt as far as solving this problem. We went over to Cape Canaveral, Florida. There was a channel over there where some research had been conducted. We knew there were a number of sea turtles in that channel, big loggerheads. It wasn't an area that was suitable for shrimping. There was a lot of finfish bycatch. You might catch five shrimps and a toe. But it enabled us to be able to test these devices and evaluate them as to their effectiveness. But simply by pulling one net with one of the gears simultaneously with a net that did not have a TED and very fundamental, we were able to tell. We went over there. Actually, that included some environmental groups that came on the boat as well and National Marine Fishery Service. We kicked some of the industry ideas over. By golly, they worked. They worked, and that probably was a turning point. The gear was number one industry idea. Number two, they were a little lighter and probably a little simpler in design and construction, I think.

MJ: This was TEDs and BRDs?

GG: Just TEDs.

MJ: Just TEDs.

GG: You had to understand that the (NMFS?) device – and I actually had a fisherman using one of those. That (NMFS?) device had BRD built into it.

MJ: Oh, it did?

GG: That was effective. It got rid of a lot of fish. I had a couple of guys that were fishing on the beach using the big (NMFS?) gear just because of the fishing exclusion.

MJ: Wow. That's something. When you talked about Dave Harrington and CJ Keith, were there other interesting notable people that you worked with?

GG: Yes, Hollis Forrester was one of the old pioneers. Hollis was the guy who gave me his boat in [19]86. Hollis had a heart attack and had to get off the water. Man, well-respected NOAA's gear. Actually, I got some grants from the Gulf and South Atlantic Fisheries Foundation to use Hollis in outreach. So, I had a well-respected fisherman that I was sending up and down the coast. If somebody had problem with the TED and really wanted to work on it, we'd send Hollis down there. If they want to go offshore for a couple of nights to actually evaluate, we'd send Hollis or I'd go out. So, yes, he was very notable. For me to tell you, the notable folks that I

have worked with, it would be a list of mile long. I've worked with some beautiful, wonderful people in this industry.

MJ: What other technologies do you think that you have worked with that you would like to talk about that have made a difference that you think?

GG: I've worked a lot with the bycatch reduction devices for finfish and continue to do so. I just did fifty days offshore last fall and looking at new gears or something we can move forward to test and maybe have an improvement. For sure, we're doing some good work there. The sea turtle issue, for example, let me tell you to go back to it. One of the things we did around 1997 was if we got a grant to go out and put observers on the boat. This is, again, to the Gulf and South Atlantic Fisheries Foundation. We put some observers on the boat and went out and pulled nets without TEDs and collected data as to sea turtle capture. In addition to being able to get some sort of idea of what was there, it helped with the industry because I can always go back and say, "Look, you see there's no sea turtles." This guy over here comes to the last trip in shore or this boat out here went out and made a long trip, but they did make it in deep water. But they didn't catch anything. But the next trip we went out on another boat at the deep water and it caught a turtle out there. But the turtles are near shore, mainly. We know that as far as numbers. That was important work for me because – and being able to show people. We worked our way up off to the western side of Louisiana off of Cameron, made some drags there. So, I showed them, "Hey, man, we caught four sea turtles here on the beach in eight days." They'll say those are not turtles. That was one of the things that I did. There's so many things have happened. I think it made a difference in 1990. I started taking a look at high-tech fibers.

MJ: So, high-tech fibers for the net?

GG: For the nets. Allied Fiber had developed a material that was for armor called Spectra. I pulled the first vector trials and rigged them up and he caught on. In fact, I probably had to estimate four hundred or so, four to five hundred boats upon inspecting the netting, which was much more expensive. We had the conflicts in the Middle East. There was a high demand for that product, and the price went up, and people backed off. Now, they're going back to it again.

MJ: Really?

GG: Yes.

MJ: What was the advantage for having that?

GG: I was able to pull a smaller diameter webbing that had equal or greater strength of – than that of the traditional nylon. By decreasing that size of webbing, it reduced drag and created less fuel efficiency. Down those lines, we just completed doing some work in a few years ago with a new type of trawl door. We've taken the vented camber trawl doors. They are half the size of our traditional wooden doors and…

MJ: They are aluminum?

GG: They were steel.

MJ: Steel.

GG: In some cases, we reduced the fuel consumption by twenty-eight percent on certain vessels. These doors require more effort. As far as adjustment, stay on top of them. They're not for everybody. It's been really interesting. There's over a hundred vessels in Brownsville pulling them right now. You move into some of the other big ports, and there's none. So, it's just the way the industry operates.

MJ: Do you think for the shrimp fishermen today, it is important that they pay close attention to all these different details about their gear?

GG: Absolutely.

MJ: Or something like that.

GG: Absolutely. It has always been important. It has always been important. You get on a vessel, there's just so many things that the captain has to attend to. He has to be concerned about crew safety. He has to worry about navigating that vessel and not hit a platform or another boat. He has to avoid these bottom obstructions. He got to find shrimp. He's got to stay on the shrimp. He's got to make sure these doors are working effectively. He's got to make sure everybody is getting along on the boat and things are gelling then. It's very complicated. It really is.

MJ: I think we need to…

GG: Maintenance on the engines.

MJ: Exactly. I think we need an ethnography of shrimp fishing boats at some point.

GG: Yes.

MJ: It would be kind of interesting to look at. Just kind of give me an overall view of what you think from the beginnings that you've had in working with the shrimp fishing industry and where it is today and where do you think it is going to go. Has it improved? We have a lot fewer vessels. There are a lot of different reasons for that. What do you think the future is for shrimp fishing in the Gulf?

GG: I think the uniqueness of the wild-caught product would probably be the savior. It's going to require some marketing. But one of my colleagues did a taste test, for example, between captively reared shrimp and wild-harvested shrimp. Through using scientific protocols, he was able to determine that over ninety percent of the people could determine the difference in the taste. I'm not going to tell you that majority of people prefer the wild-caught taste, but a number – probably close to half did. I think that presents a potential for a niche market. I think right now we're only providing eight to twelve percent of the overall shrimp that are on the markets.

You've got fifty percent of the people preferring the taste of that shrimp, and then I think the industry has a real big chance on that. I'm going to tell you shrimping has always been fuel intensive and requires a lot of fuel. We're going to have to find ways of reducing that cost. Right now, I'm positive about the industry. I think there's a future in it. Would it support the thousands of boats that we had at one time? I don't think so. We need to make sure that we're having a good catch per unit effort in order to be profitable. I think it's going to take people that are good managers and business people to keep it going. I think it's going to be around. I'm positive about it there.

MJ: As a marine adviser, what do you think some of the biggest changes in the way that you have to do your work have been?

GG: I deal more with ethnic groups than I ever have. I think in the offshore shrimp fishery, I think there are fewer now, fewer than two dozen Anglo fishermen in Texas where there used to be hundreds.

MJ: Really?

GG: It's now primarily Hispanic and –

[end of transcript]