

Wild Caught  
Rich Carpenter Oral History  
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Interviewer: MB – Matthew Barr  
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Matthew Barr: Well, talk a little bit about that. I mean, there's nothing like fresh seafood now, just as we kind of get started. I mean, I think a lot of people don't realize that what – now, as I understand, about half the seafood in this country now is imported.

Rich Carpenter: Quite a bit of it is imported. I don't know if you've been reading, but recently, there were some of the crab processors. It asked for some relief from imports from the federal government because of the problem with the imports and the impact of those products on the products that are caught here in the United States.

MB: Well, just to get us started, Rich, why don't you talk a little bit about the State of North Carolina Division of Marine Fisheries, what are some of the different responsibilities of this agency and what it does? Just so we can get an overview to start with.

RC: Okay. We are the state agency that deals with the marine and estuarine portions of the systems here in North Carolina. We have quite a few different groups within the agency. But basically, we're responsible for the stewardship of the marine and estuarine resources in the state of North Carolina. We have several different groups. We have a fisheries management group who does all the basic research to try to make sure our fish stocks stay in a healthy condition. We collect information on the different fisheries, the size, composition, species composition, in those fisheries, to monitor changes over time. Then we propose rules if we feel like they're needed on size limits or creel limits, or landing quotas, to try to keep those stocks in a healthy condition. We have a group of professional law enforcement. We have a professional law enforcement arm within the division that enforces all those rules. We also have a group of people that are in the resource enhancement section that deal with artificial reefs. We maintain a series of artificial reefs along the coast that they deal with, as well as some of the oyster programs. The rules that we have enacted and that we enforce are actually passed by a group called the Marine Fisheries Commission that is composed of members of private citizens with expertise or interest in a variety of sectors within the recreational commercial fishing industry. There are recreational seats, commercial seats that are presidents and non-member board. They actually pass all the rules and regulations that we do have. Again, we collect the information and make proposals to them. Then they either modify the rule or pass it as it is or deny it, but it's run through them.

MB: Let's see. Can you tell a little about how many people work for the division? How many offices there are, just roughly.

RC: We have between 150 and 200 employees in the division, again, split within the groups and then the administrative sections. We have a six offices within the division, scattered throughout the state field offices and then the main office in Morehead City. Especially the fishery management staff and the law enforcement staff are again stationed in the field offices to try to cover the state the best we can.

MB: Okay. Can you talk a little bit about you're a marine biologist yourself by training?

RC: Right.

MB: Can you talk a little bit about your work and what some of the things you do? For example, like, this document is about Sneads Ferry, portrait of a fishing town. What kind of work would you do around Sneads ferry? Or what are some things that you're involved with?

RC: Yes. We do quite a bit of work around, in and around Snead's Ferry, and work very closely with the fishing community there. One of the primary things that we do is we maintain an oyster management program. So, we will go and maintain public oyster beds. We have quite a few in Sneads Ferry that we maintain. It's kind of a collaborative effort between us and the fishermen. They will recommend sites for us to put these public beds, and then we'll go and put shell out to grow the oysters. Then we'll reap the benefits eventually with the harvest. We do a lot of monitoring for shrimp, especially when we open and close areas to shrimping based on size. So, we do a lot of work on the water up there for that. We monitor a lot of the commercial catches, again, to track any changes we may see in species composition or size composition in a fishery. We're dependent on sampling the commercial catches. So, we do that for instance, with some of the finfish and the crabs in Sneads Ferry. Again, this is something that that we do in in collaboration with the fishermen. There's no way we could do a lot of the work that we do without their help. I guess a new facet of our work, and also the work that the fishermen do, is we are now doing fishery management plans for a lot of the species that are harvested in and around Sneads Ferry. That requires panels that are composed of not only division employees, but mainly fishermen who participate in these fisheries to help draw up these fishery management plans.

MB: Just on a more personal note, how did you become a marine biologist? Talk to me a little bit about that.

RC: I graduated from University of Richmond with a bachelor's degree in biology and basically was unsure of what to do. So, I went to graduate school at the Virginia Institute of Marine Science and got a master's degree in marine science. One of my professors there told me to come down here and interview for a job. So, I did and they hired me. Told me I was coming to Wilmington, and that was twenty-three years ago. So, I grew up in Virginia on the James River and on the Chesapeake Bay. So, I've been around the water all my life and just had an interest in it.

MB: Do you do sampling and stuff like that yourself?

RC: I do a minimum amount of sampling now. I used to spend quite a bit of time on the water, but I've been given some other responsibilities. They don't really allow me to get out on the water like I used to.

MB: Okay. Can you give a little bit of an overview of in terms of looking at commercial fishing when you start with the whole state. Does North Carolina have a pretty strong commercial fishing industry? I mean, I don't know what the ranking is with other states.

RC: On a national basis, yes, it does. It's got a very strong presence in the commercial sector as well as recreational sector. The thing that's really interesting about North Carolina is the diversity of fisheries that North Carolina fishermen participating in. I don't know of another

state in the United States that has the diversity of fisheries that we have with the shell fisheries, the fin fisheries, both inshore, offshore. Our shrimp fishery, which is a pretty large fishery on the East Coast, probably the largest on the East Coast. The reason behind that is that geographically, North Carolina is situated in a space where we have northern species that come down from the mid-Atlantic region, as well as more southern and tropical species that come up from the South Atlantic region. So, we have a mix of both of those zoogeographic provinces in our fisheries. So, that's why it's so diverse.

MB: Well, what are some of the different types of species that are fished?

RC: Sure. Again, the other thing you have to realize is that here in the southern portion of North Carolina where Sneads Ferry is situated. Our fisheries are more similar to those in South Carolina than they are to the rest of the state. You see a lot of the offshore species in the landings here, the snapper and grouper, mackerel that originate from the Southern part of the United States. The other things that you see in and around Sneads Ferry, especially the bay scallops, which is in a very small zone within North Carolina where they're found. Oysters and clams, shrimp are the predominant species that are landed in this part of the state. Then as you go north and in the state, you start running into bigger fisheries for like flounder, a lot of the same in spot Kroger, gray trout, those finfish species tend to dominate the catches there.

MB: Sneads Ferry is the main thing with shrimp.

RC: Shrimp, oysters, clams, and then, finfish, flounder is a big component of the fishery in Sneads Ferry. It's unusual in this part of the state. But it's because of New Rivers, a fairly large water body for this part of the state. So, it's able to support that flounder fishery. Then they have a very active crab fishery there in Sneads Ferry. The crab fishery is actually the largest fishery in North Carolina. But the predominant or the major portion of fishery takes place in Pamlico and Albemarle Sounds. The component here in the southern part of the state is quite small, but it's still a very important component of the fishery within New River.

MB: Is that kind of an unusual – looking at Sneads Ferry, that New River, which is pretty wide river there. Talk a little about Sneads Ferry and its kind of uniqueness as a – we just talked before the interview about, well a number of different factors. I mean, let's start getting on Sneads Ferry a little bit. Is Sneads Ferry kind of a true fishing town, and the old style, so to speak, a little bit?

RC: It is. Sneads Ferry still is a fishing community, or at least I consider it so. It's gotten to be the exception rather than the rule, especially in this part of the state where traditional fishing communities have kind of – with the rapid development along the coast – have kind of been overrun if you will. Fishing has become a component of the of the economy, but not the major component. Whereas Sneads Ferry is still probably the major component or very close to it.

MB: I guess, partially with the marine base being there because that's held back, in other words, you see it's growing Sneads Ferry. I mean, [inaudible] obviously, is growing. I mean, the whole area is growing. There are a lot of homes on intercoastal. Do you think the way of life – I'm trying to get into the idea is what do you think in terms of looking down the road for Sneads

Ferry? Will they be able to continue, do you think this tradition?

RC: I believe that, yes, that the fishing tradition will be able to continue in Sneads Ferry. Part of it is because of the uniqueness of where it is. You do have Camp Lejeune, which surrounds New River. So, you're not going to have the residential and commercial development on that watershed like you've seen on some of the others. So, that's going to help keep the fisheries and viable in that area. So, I think, I think they will continue there certainly hope so.

MB: So, we've seen a lot of traditional fishing towns kind of over the years. I'm trying to all over the place, lose a little bit of their traditional owners, like you say the words. As things change then, I suppose a lot of fish communities have lost that kind of sense of the way they used to be.

RC: Yes. I think so. I mean, you had communities that were consistent. You had communities that existed because of the fish in their proximity to fishing grounds and areas. As more and more people have moved to the coast, the fishing tradition still continues in these areas. But it may just be a smaller component of the local economy. So, the fishing activity is still there. It's just a smaller component of the total overall economy.

MB: Okay. So, in terms of Sneads Ferry specifically, what are some of the main types of fishing that go on there? I think you already said this a little bit.

RC: Okay. In New River and Sneads Ferry, the adjacent ocean, the primary fisheries are for shrimp, oysters and clams, crabs, and flounder. Then out in the ocean, you have people who participate in the bottom fisheries for snapper, grouper, black sea bass, as well as some of the pelagic species, Spanish and king mackerel. Those fisheries predominate the catches in the Sneads Ferry area.

MB: Take us through the seasons, like shrimping. How long did the shrimping all year? Take us through some of the different seasons where the shrimp was.

RC: Okay. Shrimp season generally will run from spring, starting in maybe April, and can run as long as the early part of January, depending on the weather and the temperature. In this part of North Carolina, we actually have three different species of shrimp. You do find all three species in in New River. If you start in the spring, the brown shrimp, the small brown shrimp, come into to the river systems in the early spring, late winter, early spring. Then the brown shrimp is also known as the summer shrimp. So, they're being harvested starting in June, July, and August. We have two other species, white shrimp, and pink shrimp, that are actually spawned in May and actually, kind of come into the estuaries in in June and July. Those species are harvested in the fall. In some years, if the weather's not too cold, and we have a good number of those, they will overwinter in places like New River and will be called again in the spring as adults.

MB: How about oysters? When can they go get oysters?

RC: Oyster season begins in the middle of October and runs through the end of March each

year. I mean, that's a very set season. You know, it's just date certain there, as opposed to shrimping.

MB: Okay. You covered some of the other types of mullet. Can they get mullet year round?

RC: Mullet are present year round. The abundance varies seasonally. Really, the fishery, the main component of the fishery takes place in the late summer and early fall. A segment of that fishery targets the row in the mullet, which is a very valuable product, a fishery product in the mullet fishery.

MB: I'm just trying to get some approximation. I don't know what kind of statistics or any idea of how many pounds of shrimp are caught around Sneads? Would you have any idea?

RC: I haven't. It's probably best to look it up and go from there, because it varies seasonally. It's a big component, a big catch in the New River area. But the percentage that, say, for instance, shrimp makes up in a certain year is totally dependent on the abundance of shrimp that year. So, it can vary quite a bit.

MB: People like (Mack Liverman?), I mean, a couple of days ago, I don't know if the camera brought good luck to the catch. Because both times when we went out, it wasn't great nights for him. They were going to look at us like, "These guys again." But within the next day, after the first time, we got 800 pounds, a pretty good load of shrimp. That was good.

RC: Right.

MB: But it must add up. It's amazing how many shrimp come out of that ocean.

RC: Yes. New River is an extremely productive body of water. So, seasonally, the catches can be quite high, but you do have to remember that that doesn't go on all year. As you saw when you went, it can vary from day to day, quite a bit.

MB: So, for the live fishermen, then they've got to kind of repair the equipment in the winter. Is there downtime?

RC: There's some downtime. But again, it depends. For instance, some of the largest shrimp boats will go to Florida in the winter to shrimp. They may go to South Carolina and Georgia in the fall and in the spring to shrimp some. Some of the other participants in the shrimp fishery do other participate in other fisheries in the winter. They may go clam and oyster in the wintertime.

MB: Well, here's some issues to kind of touch on. How would you say overall, I think there are a lot of misinformation, stereotypical stuff about fishermen and fishing in the popular imagination or mindset. A lot of people, I think, think that, "Gee, all the fishing, everything's been overfished." So, I mean, how are the stocks around North Carolina overall or the East Coast? I mean, overall, are things looking pretty good?

RC: Again, that the health of the stocks varies tremendously by the species that you're talking

about. A good example would be striped bass was a species that was heavily overfished in the [19]60s, [19]70s, and [19]80s. Some very severe restrictions were replaced on those fisheries along the east coast, and that stock is rebounded. So, some of the stocks, like mackerel and shrimp, are in very good shape. Some of the finfish species are not. The summer flounder has been overfished or fished to a lower level. There are some severe restrictions on both the recreational commercial fisheries there to try to get that stock to rebound. Weakfish or gray trout was fished very heavily. We saw a decline in that stock. There's again, been some fairly severe measures placed on both the recreational and commercial fisheries there. That stock is starting to see rebound. So, it varies very much by the fishery you're talking about.

MB: But in terms of shrimp, which seems to be the mainstay for Sneads Ferry for shrimpers, I know it changes. But would you rate the situation is looking pretty good overall?

RC: Yes. Shrimp is a viable fishery. Unlike some of the finfish species with a species like shrimp, which is an annual crop, you get a new crop every year. The abundance of a shrimp crop for a certain year is dependent a lot more in environmental factors that they find when they enter the estuarine portions of the system. So that if conditions are favorable, you're going to have a much better crop that year now or if conditions are harsh then your crop will be depleted a little bit. So, it's a lot more dependent on environmental conditions as opposed to the number of individuals that you're having to stop.

MB: Okay. I mean, has pollution really become a factor in all these things we're talking about? Looking specifically around North Carolina or whatever, is that a significant thing in terms of, I guess, we've had always hurricanes. I read newspaper reports in Greensboro about, like when those hog farms would overflow and stuff like that. I know you guys obviously sample water purity and all is that. This document really isn't looking at those issues, but I think it ends up getting touched upon here and there. Which is leading to the question we get, every fisherman we talked to ends up talking about the rules and the regulations. They seem to be very upset about a lot of them.

RC: Sure.

MB: but it will talk about pollution. Is that something an issue really say with the New River? The New River actually begins and ends in Onslow County, right?

RC: We're very close to it, yes.

MB: Okay.

RC: Yes. Certainly, water quality plays a significant role in fisheries. In this part of the state, the primary effect you're going to find with water quality is whether or not an area is open or close to shellfishing. Okay. The standards that are set in North Carolina depend on the amount of bacteria in the water. So, if the standard is exceeded for bacteria, then the area is closed to shellfishing. That's quite prevalent in this part of the state. As you've seen more and more development in land clearing in the southern portion of the state, we've seen more and more areas close to shellfishing because of bacterial counts. The other thing that we have seen over

the years is an increase in areas that are depleted of oxygen in the summertime because of algal blooms that deplete the oxygen in the water. So, you have dead zones, which is a loss of area that populations are able to use in our estuary. So, certainly, that's had an effect. Fishing has had an effect on stocks. I mean, that certainly is another one of the factors that influence the size of a stock. Then the third thing would be any habitat losses that we may have had with wetlands, loss of wetlands, and that kind of thing has an effect. So, people depending on their bent are always prone to point the finger at one place. It's really not the case. Its water quality, fishing, and habitat loss all have an impact on our fishery stocks.

MB: Okay. As we're going through these issues, the issue of bycatch, where it's obviously [inaudible] there are these turtle. Can you talk about what the [inaudible] do and all that words. But obviously, if you net, then sometimes other things besides the shrimp get in there.

RC: Shrimping is a good example of a fishery that does have bycatch. What the State of North Carolina has tried to do is to minimize that bycatch. We've done that through closure of different areas where you may have a very high concentration of finfish and crabs that would make up part of that by catch. Those areas have been closed off. We've done a lot of gear work in conjunction with the commercial industry to try to devise devices that exclude a lot of that bycatch. You may have seen that when you went on the shrimp boats. But there are devices that are required in all shrimp trawls to reduce the finfish bycatch as much as possible. Another device that was designed to reduce bycatch is the Turtle Excluder Devices, or TEDs, that are designed to exclude sea turtles from the bycatch. They also have a tendency to exclude a lot of debris and jellyfish and that kind of thing that that shrimpers encounter while fishing, that really, will impair their ability to fish and gets this kind of a logistical nightmare to handle a lot of that. So, there have been some real advances in that to try to reduce the bycatch.

MB: So, in other words, the bycatch, I mean, you don't really, I don't want to put words in your mouth, but in other words, the bycatch was that – do you think that gets a little overemphasized as how bad the bycatch is? In other words, I mean, you know because I've watched them. In the area, a lot of those crabs can survive. They shoot right back in the water.

RC: A lot of that is dependent on the area you're in. Because the amount of bycatch in, for instance, shrimping operations, varies by orders of magnitude depending on where you are and the season or what time of year it is. So, I mean, bycatch is certainly still a concern. Just because we've developed devices to exclude as much of the bycatch as we can, there's quite a bit of work still ongoing to improve those devices and to develop devices that will exclude bycatching other fisheries. So, it's not a static process. It's still ongoing. There's quite a bit with the goal of getting rid of it, as much of the bycatch as you can because nobody wants it. So, we've done quite a bit of work in conjunction with the industry and continue to do so for various types of gear.

MB: Okay. Well, like I was just saying, a lot of fishermen, from the interviews, they're saying, "Well, we're worried about the future that there are a lot of rules that are changing the name of the business forum. It's gotten more technical."

RC: I can totally understand their concern about the numbers of new rules and regulations.



Because in the last few years, there have been quite a few new rules and regulations. A good example of this would be the snapper grouper fishery offshore that there's some participation in the Sneads Ferry area. The thing that we're faced with as managers is that technology has improved so much in such a short period of time that people are able to go back to within a few feet of where they were the day before, miles from shore on these fish. That just puts a tremendous amount of pressure on those stocks. These are very long lived fish, and it's very easy to overfish them in a short period of time. So, that's one of the reasons for all these rules, is to try to make sure that we do preserve them. But again, with the improvements in technology, it's just a lot easier to catch the large numbers of fish and go back to that same spot again.

MB: Those are those fish [inaudible]?

RC: That and the GPS units. Again, you can go back to within several feet of where you were the day before. A lot of people don't realize what effect that that has on a stock of fish where you can just go out day after day and hammer them. The other thing is that technology is available to everyone. I mean, it's not a commercial fishery that's doing this. It's a combination of the commercial and recreational fishery. So, you have so many more people participating in that fishery now than you did years ago.

MB: So, to become a commercial fisherman in the state, what do you have to do?

RC: There are license requirements to participate as a commercial fisherman. Back in their mid-90s, the State of North Carolina put a moratorium on any new commercial fishing licenses. Essentially called a time out and said, "We need to step back, look at what we're doing and the way we do things, and see if there's a better way to do that." So, there was a moratorium issued again in 94 and in 1997 after numerous public meetings, committee meetings involving representatives of the industry as well as the recreational industry. A set of recommendations were drawn up and presented to the legislature. That resulted in the (Fisheries Reform Act?) that totally revamped the way North Carolina licenses its fishermen and also the way our agency does business. By virtue of that legislation, we're now in the process of writing fishery management plans for all of the major fisheries in North Carolina to just kind of give us a way to deal with fisheries in the future. Look ahead a little bit if you will. We do that with great deal of participation by all the user groups that are participating in these fisheries. So, that was a pretty major change. There's a cap on the number of commercial licenses that are issued in North Carolina now. So, we're slowly changing the way we do business. I should have said it slow because that was pretty quick.

MB: Do you become a commercial fisherman just by paying for a license?

RC: Not now, no. The way the Fisheries Reform Act was designed was number one, one of the things was to put a cap on the number of commercial fishermen in the state. But try to continue the family tradition of commercial fishing, so that there are avenues available to young people to get into the fishery and through their family's involvement in the past. Then it fosters an apprenticeship if you will for people to learn the fishery who are participating with their family before actually entering it. It's a good tool because you end up with a fisherman that are better versed in not only methods of fishing, but safety and that kind of thing. One other thing that

probably need to touch on with commercial fishing especially and where a lot of the new rules and regulations have come from is the federal government requires federal permits for fisheries. A lot of the fisheries that take place out of outside of three miles. So, fishermen are being hit by regulations, not only on the state level, but as well as on the federal level. That's why they feel overwhelmed about at times, because things change very quickly now. In addition to having a commercial fishing, license for North Carolina. For instance, if you want to go out and harvest king mackerel on a commercial basis, you have to have a federal permit to do that as well. There are requirements that were instituted by the federal government to obtain those permits, not anyone could obtain them. There were income requirements placed on those. So, the feeling of commercial fishermen, and recreational fishermen as well as always having a lot of new rules and regulations to deal with is understandable, because there have been quite a few.

MB: The federal jurisdiction goes out how far?

RC: To 200 miles.

MB: 200 miles out [inaudible] United States.

RC: Right. That's a whole hour's worth program just dealing with the different jurisdictions that are able to manage the fish stocks. I mean, because you do have federal jurisdictions, state jurisdictions, and there are various types of federal jurisdiction. Again, something that we touched on earlier was North Carolina's unique position geographically along the East Coast, where we have species that are in our fisheries from both north and south of North Carolina that mix and give us a very diverse fishery. It would also present problems with management in that North Carolina has a stake in how things are managed up on the Mid-Atlantic as well as the South Atlantic. That's addressed by regional fishery management councils. North Carolina participates in both the Mid-Atlantic and the South Atlantic fishery management councils through voting members, which is unusual. A lot of times, the majority of states are just represented on one council. But again, because of the diversity of our fisheries, we participate in both of those councils as well as the Atlantic States Marine Fisheries Commission, which is another entity that is comprised of – [coughs] excuse me, all the states on the Atlantic Coast. They have an interest in managing species such as striped bass that you find in inshore waters as well as in the ocean and find among all of those states. So, the fisheries management has gotten quite complicated.

MB: This is a really off-the-wall question, but worldwide, is fishing in trouble? Are thing really behind. I'm just curious. There's nothing to do with the documentary. Because just again, I've been reading some books about fishing and non-fishing books. Is fishing really going on worldwide? Is that a major deal?

RC: Sure. Yes. There are stocks being over fished throughout the world. Again, that varies regionally. A lot of it depends on the different regulatory entities that govern fishing in that area. There are a lot of international regulatory groups that deal with fishing for species such as tuna. So, it's definitely a problem worldwide. But again, it's not a thing where you can say all fish stocks are overfished. I mean there, there are certainly stocks that are in very viable condition.

MB: Well, that's good. I guess, obviously, it seems very important.

RC: Yes. Otherwise, you probably wouldn't be seeing any seafood.

MB: Right. Well, what about all these fish farms, speaking about that? Like Ecuador, whatever.

RC: They're growing shrimp known farms in in Central and South America, both. There's a little bit of that. Now in South Carolina is about as far north as it's been proven to be economically viable. That has to do with temperature. Shrimp require a fairly warm water in, the species that we work with in order to grow. In order to be viable, you almost have to have two crops each year to make it economically feasible. The climate here just doesn't lend itself to getting two full crops in each year. So, that's why you don't see as much of that here. Farm raised shrimp certainly has an impact on the natural harvested shrimp that we have here, both for competing for price and market share.

MB: So, talking about shrimp, the main way that they shrimp off of in Sneads Ferry, there are some different variations.

RC: The main gear used for shrimping in Sneads Ferry and around Sneads Ferry is our shrimp trawls, which are nets that are opened by two large wood doors and you pull behind the boat. There are some other methods of fishing, channel nets, that look very similar to shrimp trawls. But they are actually staked out in the bottom. As the current flows through them on an ebbing tide that that carries the shrimp, those nets seine the shrimp out of the water if you will. Then there are also gears, such as butterfly nets or skimmer trolls, which are metal frames with shrimp, with webbing on them that look a little bit like a troll. But they're actually held open by frames. Either hold them in the tide and work on the same principle as channel nets or you move them along. Move them ahead slightly. But you see all those types of gears in Sneads Ferry. If you look at the shrimp fishery over the last 20 years, you've seen a large increase in the number of these more passive years, like channel nets, butterfly nets and skimmer nets and a move away from traditional shrimp trawls. There are a variety of reasons for that. One of those is bycatch. It's just not as much by catching in those gears as there are in traditional shrimp trawls.

MB: Has the equipment gotten bigger and more powerful? Originally, the shrimp boats were smaller twenty years ago.

RC: Yes. The larger boats that work in the ocean, we've seen an increase in the size. For a period, we're seeing a great increase in just the numbers of boats. I don't know that that's the case anymore. That seems to have leveled off some. So, the number of participants probably hasn't grown greatly, but the fishing power of the participants, particularly in the ocean, has increased.

MB: So, how many people have commercial fishing licenses in the state?

RC: I believe last year, there were about, not quite 8,000 commercial fishing licenses issued.

MB: I guess that's quite a few.

RC: It's quite a few. Again, the level of participation varies greatly. Because the way the moratorium was set up, people who held a license in the past, as long as they renewed it, were able to keep their licenses. So, there are people who hold a commercial fishing license that don't fish a great deal, but they still do hold the license. So, I've not seen a breakdown lately of the number of part time fishermen versus the number of full time fishermen. There are still quite a few part time fishermen in North Carolina that participate in the commercial fishermen.

MB: When people fish from mullet or some other finfish, how do they do that?

RC: Again, that varies. Species like spot are caught with gill nets. Flounder are caught with gill nets. Mulletts are caught with nets that are run around and actually entrap the fish. So, it varies between those two gears, primarily in the Sneads Ferry area.

MB: What is a gill net?

RC: A gill net is a net that is made up of meshes that are sized to catch a fish that you're targeting. As it swims, it'll swim through a gill net mesh and lodge in that net. Again, the mesh is sized to catch a particular size or species of fish. The mesh sizes vary greatly depending on what you're targeting for.

MB: Okay. Here's kind of a wrap up thing. This more of a technical question, but in other words, I mean, you've been in this business a long time. Sneads Ferry, just to get a sense of the fishing families we talked about. The way of life thing, if you could talk a little bit about that and the importance of that in our state.

RC: Okay. Sneads Ferry is, is a real unique place. Again, you have a very diverse fishery there, because that people participate in quite a few fisheries and will participate in quite a few during the course of the year. But you have a large concentration of people who are still totally dependent on fishing for their living, which is a little bit different than what you may find here in the Wilmington area. You find families that have been in the fishery for generations. The majority of these folks are what I call true professional fishermen. They're conscientious about what how they fish and what they do. They are a very important resource for people like myself as we try to make sure that these fisheries continue in the future in helping us and try to develop guidelines and rules to ensure that. We couldn't do that effectively without a participation by professional fishermen. Again it's just a strong tradition in Sneads Ferry, family tradition of fishing.

MB: One of the things that impressed me they can build well rigging.

RC: What I consider true professional commercial fishermen, they have to be able to do everything from a lot of them still are able to build boats to any kind of maintenance that they have to do on their boat and their gear. They're very much self-sufficient. Again, that's that true commercial fishing tradition that I was considering, just to be able to do everything be a jack of all trades.

MB: Kind of like farmers have to be able to build that.

RC: That's right. It's very similar to farming in that respect.

MB: Yes. I mean, the Davises. [inaudible] They only have a crane there. They may have built or they're rebuilding the beautiful head boat that's kind of traditional thing up. It's awesome.

RC: Yes, it is.

MB: That's all first rate. They have a [inaudible]. The other thing is the complexity of fishing is, really, I don't know what they're talking about half the time. It's like about tides. But I understand what the tide is. But you know what I'm saying? It's like, God, they worry about the moon. This is complicated. Like Johnny, you can't just pop the crab pot anymore. He has a PhD in [inaudible].

RC: Well, you do. Not only do you have to be aware of all the environmental conditions and the variables, tides, weather, moon phases, you have to keep up with rules and regulations. You have to be able to, maintain your equipment. You have a variety of things that you need to keep up with. So, it's not a simple business. I mean, people view it as that. But if you get right down and talk to the participants, they have to know a lot about a lot of different things.

MB: So, it's actually pretty complex.

RC: Very complex, very, very complex. I'm sure they'll tell you, "You learn something new every day." It's extremely complex.

MB: I guess also, it's a way of life too. We're going to culminate the filming of the Shrimp Festival. I think it's a powerful sense of community some of these families are going to have. They've been there for long time. I mean, it's kind of almost feels like having a name letter or someplace. There's this family, there's that and all that. That's the first cousin of my wife. To me, it really does feel like a different world in a way. Certainly, they're different.

RC: The other thing that's interesting is the amount of knowledge that's passed on from one generation to the next. It's interesting in seeing how they can improve, over the years, how they improve their operations, and that kind of thing. Be able to know what people have done before. But then adding new twists, and able to improve their operations and their efficiencies.

MB: Well, some of the younger ones are worried about the future. Not just young ones, some of the older ones, they think that they're in a dangerous species. I mean, they've said that.

RC: Right.

MB: Commercial fishermen, will they be able to continue? I think there's a lot of issues involved here.

RC: Well, there are. There are environmental issues. There are regulatory issues. I can understand people's concerns about the future. Because you just don't know what's going to happen. But again, commercial fishermen as a group are very adaptable. I mean, they have to do it every day. They have to adapt to changes and that they're quite good at it. They're quite good at it. But at the same time, you still can understand that they're concerned about the future.

MB: Well, not just on fishing, but you know, how do you open up a small bookstore these days? You can get mailed. It's not a very independent business. They got their big expenses, and they never know how they're going to do. It's always tough.

RC: That's part of it. Yes. Again, like small businesses, a lot of the things that affect your bottom line, you have no control over whatsoever. The hurricanes last year were a very good example. It's just that you don't have any control over that. So, in a lot of respects, it is like farming. In addition to all the other business variables, you have environmental conditions that you have to worry about.

MB: Plus, it can be dangerous too.

RC: Very dangerous. Commercial fishing is probably one of the most dangerous occupations you can participate in.

MB: Speaking of the perfect storm.

RC: That's getting nasty. Get nasty in a hurry.

MB: Anything else you want to add?

RC: I don't think so. I've probably talked longer than I have in a long time.

MB: Sure.

RC: Yes.

MB: Well, in the course my filming there, for instance, I don't know if you wanted to get into technical stuff. Because you look in the book and find out. Like the links to a crab, I didn't know what they were. I know Johnny was looking at these notches he'd make. I didn't know what they were.

RC: The notches say we have size limits. Minimum size limits on crabs, and that's five inches. Most of these guys, their eyes are probably good enough to get within an eighth of an inch. But they have different ways of measuring the crabs. A lot of them will notch, in the side of the boat or in their culling tray, a five inch space. So, if it's close or borderline, they'll use that to measure whatever it is they're catching. Again, there are size limits on most species of fish and crabs and shellfish. So, they have to carry some kind of measuring device with them at all times.

Male Speaker: Because we haven't gotten into this yet, are there limits on clams size?

RC: Yes. The size limit is one inch in thickness. All clamps have to be one inch thick. The size limit on the clam is one inch thick. They have to be one inch in thickness. For instance, oysters have to be three inches in length. Some of that's biologically based. Some of it's actually based on markets. The majority of the size limits for finfish are biologically based, almost entirely. Whereas with some of your shellfish, in addition to being biologically based and allowing some of them to spawn, it's also a market consideration.

MS: Also, the female crabs that had grown, they all go back.

RC: A lot of fishermen put those crabs back. It's not required by law, but a lot of them do return those crabs with egg masses so that they can hatch their eggs. The other thing with an egg-bearing female is the yield from that particular crab is not as great as it is for crab that doesn't have that or a male crab.

MB: Thanks so much.

RC: Yes. I hope you get something out of that you can use.

MB: Absolutely.

[end of transcript]