

[00:00:00]

Interviewer: Can you state your name for the interview?

Interviewee: Captain Rodney Raffield.

Interviewer: Thank you. So, what I would like to know in the first place is a little bit about you and your business. When did you start fishing and in what area? A little bit about that history. Then we're going to talk about the red tide events that you've observed throughout your career and discuss each of them.

Interviewee: Well, we'll start in the beginning here because I've only been guide fishing, charter fishing since '06. My family's history is in the stone crab industry. As a matter of fact, I fished half of my career for Joe's Stone Crab over in Miami.

Interviewer: Oh, is that right?

Interviewee: So, yes, I'm well-acquainted with these folks here. They are, as you know, they have a fish house right there. My father before me who still has a boat and the nephew runs the boat. He's still crabbing as we speak. I started stone crabbing when I was 20 years old. I had my own boat by 22, 48 feet long. Over the years, I saw many red tide events offshore. What's interesting about our coast, south of Naples, for whatever reason, it seems like we never seem to see red tide inside the islands and close. You guys may know more about why that is than I do. So, yes. Offshore of our coast, even as far down as the Keys --

Interviewer: Oh, yes?

Interviewee: -- 10, 12, 15 files out, I've seen groupers, fish floating everywhere over the years. I've seen red tide many times.

Interviewer: So, is there any -- so, you say you see them almost every year offshore?

[00:02:00]

Interviewee: No.

Interviewer: No.

Interviewee: No.

Interviewer: How often do you see them?

Interviewee: That's a good question. I'm going to say a red tide event, maybe every four to five years.

Interviewer: Every four to five years.

Interviewee: Just guessing. It's sporadic. Not common enough I could tell you every year. I would say every two to three years maximum off our coast. Yes.

Interviewer: So, when is sort of like -- and you've noticed them for -- throughout your -- since you've started fishing in this area. You've noticed them from the beginning since --

Interviewee: Oh, yes.

Interviewer: Nothing like that --

Interviewee: Not crabbing. Yes. I've been charter fishing since '06 out of Chokoloskee and it's all in shore. I go down as far south as, say, Lostmans River, far north as Panther Key on the outside. This is all within a mile of land. Then my in-shore stuff. I've never -- I've never seen red tide, dead fish floating in my past as -- in 12 years, 13 years of guide fishing out of Chokoloskee Island. Now, I know that just north of us in Marco, they had dead fish on the beach. I know.

Interviewer: Right. Right.

Interviewee: I've never seen the fish floating in our area. We've had an exceptional year on fish. Our fish, and maybe they all came and ran away from up north to get here. The fishing's as good as I've seen as far as numbers in many years. Many years.

Interviewer: What about species? What can you tell us more about that? Did you see more diversity?

[00:04:00]

Interviewee: I'm seeing a lot of small fish. Snook. You all say snook. Snook, red fish, sea trout is my staple fish on lures. Seeing tarpon, 30 regular. So, I mean I'm just saying that, numbers wise. I've had days on snook in the creeks where we've caught over 100 fish.

Interviewer: Wow.

Interviewee: That are like a lot are small but over 100 fish on many charters with lures. So, the fish are there.

Interviewer: How does that compare with past years? You said more --

Interviewee: Much better.

Interviewer: Right but like but what -- would you say like --

Interviewee: The best fishing --

Interviewer: -- percentage wise like much more like --

Interviewee: I haven't -- I haven't seen this many small snook, or reds for that matter, or red fish in the 12 years, 13 years I've guided. It's not a lot of big fish with whatever's going on but it's a lot of fish, so. I know that those guys, as you know, they're having to release red fish into the ocean north of us because they were decimated. I've seen some of the most numbers. We're seeing numbers. Good fishing. I think any guides you talk to out of our area would tell you the same thing, that fishing's great, so.

Interviewer: So, you think that it's possible that those fish were pushed south evading the red tide?

Interviewee: You guys are the --

Interviewer: Up north they can't find it?

Interviewee: You guys are going to -- are the experts.

Interviewer: Well, this -- we'll take all this back and we'll study it.

Interviewee: I'm telling you --

Interviewer: Yes.

Interviewee: I'm just telling you what I see from a seat of the pants --

Interviewer: Right.

Interviewee: -- in the boat.

Interviewer: Yes.

Interviewee: Even when I was crabbing. We have patterns to our fishery. Every year from summer, winter, fall, spring, certain -- the fish move around a little bit. Some fish are more wintertime than others. Mainly, we catch the same type of species of fish and they all come in -- they kind of move into different places.

[00:06:00]

Interviewee: If it gets cold, they'll drop into the deeper holes when you get cold fronts. The fish, in general, snook in the -- in the summer, I might catch them on the oyster bar reefs and on the outside points along the edge of the Gulf more. Then like this time of year, they -- they stack up in these back-creek systems if you look at your chart. Ferguson River, Gopher Creek in the back country, North Water. All these back-creek systems which are brackish, fish get -- fish get in higher numbers back in those places. Now also,

getting off the red tide a little bit. We had a very serious cold weather event in 2010 that decimated manatees in our area. They don't have no place to run to like they do in Fort Myers and stuff. Supposedly, I saw as many as 30 and 40 dead manatees after -- in 2010 after the cold snaps in one little area in the back country. The water temperature got into the high 30s. That's very shallow I'd say. That's side tracked. We're side tracked now off red tide. I'm just saying that there's a lot of things that can decimate fish and it's not just red tide. Cold water. Cold snaps is one of the worst things that can happen to a fishery. I've seen thousands, thousands upon -- tens of thousands of snook dead in a day after a -- after a cold snap. *[indiscernible]* [00:07:29]

Interviewer: Right, like in --

Interviewee: It's been nine years. It's been nine years --

Interviewer: Almost, yes.

Interviewee: -- since the 2010 event and I haven't seen any dead -- we haven't had a cold - - just to tell you how long of a stretch that's been. We haven't had any dead fish from cold since then. So, yes, it takes a lot.

Interviewer: Let's talk a little bit about the red tide events that you've observed offshore.

Interviewer: I just have one really quick question.

Interviewer: Yes, sure.

Interviewer: Wasn't there a moratorium on red fish and snook a little bit north of here?

[00:08:00]

Interviewee: Yes. Still is.

Interviewer: There still is? Oh, okay.

Interviewee: They're not -- they have no snook. Well, we're out of snook season anyway but --

Interviewer: Right.

Interviewee: -- they missed their snook season that opened up in September and they missed red fish completely after the -- they're still in it as far as I know. They don't have any limits they can catch.

Interviewer: That was because of the red tide, and particularly after the red tide?

Interviewee: That was strictly because of red tide.

Interviewer: So, that was just this? That's what I wanted to --

Interviewee: Ours stayed open. All this south of Marco, we stayed open. In the national park, I do all my fishing in the national park. We're under different limits in certain things. I'm surprised they have limits at all, really. We have the same limits, basically, the FW, the Florida Wildlife Commission gives the state except the national park, you can't keep more than 10 of anything, a lady fish even, which is a bait fish basically. You can only have 10. Mullet, 10 per person. I think it may be 50 for a person to get mullet in state waters, [*indiscernible*] [00:09:16] whatever. How you doing, buddy? These folks are from Miami, too, Skip, by the way.

Interviewee: Uh oh. Skip.

Interviewer: Hi. Amanda.

Interviewee: Amanda?

Interviewer: Yes.

Interviewer: Hi, I'm Susanna. Nice to meet you.

Interviewee: Susanna.

Interviewer: Hi. Matt.

Interviewee: Matt, nice to meet you.

Interviewer: Nice to meet you.

Interviewee: Now, Skip, she probably won't tell you this. We're recording. She's recording the questions. Do you have a problem with that?

Interviewee: No.

Interviewer: So, go ahead and go to the red tide.

Interviewer: Yes. No. So, yes, so, I would like to talk a little bit about the offshore events that you've noticed, red tide event. If you go back in time, can you think of any -- any particular time that you thought it was worse than others?

[00:10:00]

Interviewee: Oh, yes.

Interviewer: In terms of extent or something like -- something that stood out.

Interviewee: Yes. Yes. I can't give you specific times.

Interviewer: Maybe perhaps the year more or less?

Interviewer: More or less.

Interviewee: What now?

Interviewer: The year more or less when you think it was worse than -- or some -- was it in relation to after a certain event like the oil spill or after a hurricane or something like that?

Interviewee: Relating to the oil spill, what year was the oil spill? Do you remember?

Interviewee: '12?

Interviewee: I'd say about 10 years ago.

Interviewer: 2012, right?

Interviewer: 20. Oh, yes.

Interviewer: It was in --

Interviewee: I was out of -- I've been out of crabbing since '06. So, I mean there's things that --

Interviewer: Oh, the oil spill. Yes, sorry. Yes.

Interviewee: I will tell you this much. Things just talking to the local crabbers. Right after the oil spill, that summer -- it was summer. After the oil spill when they started crabbing that year, the guys that had deep water lines, which were us, can be 40 miles out, the guys that were crabbing. As you know, our coastline is very fragile. They had -- the crabbers were just run slap out of the deep water by octopus and their traps. Never, ever -- this is just -- never in the history of stone crabbing since they first found them, had anybody ever seen anything like that. I assume that because of that oil, them octopus pushed further into the coastline. The octopus just wiped them guys out. They had to get their traps and come -- they had to come in-shore because there was an octopus in every single trap. Of course, they destroyed the crabs. Yes.

Interviewer: I think what -- I mean what Susanna was just *[indiscernible]* [00:11:43] could use. We just need a very general timeframe. It could be within -- we think it's in this five-year period or I think it was close to the time of the oil spill. In other words, if you can go back and recall certain red tide events that you remember as being particularly significant, maybe we could --

[00:12:00]

Interviewee: I would have to say --

Interviewer: We don't need a precise year necessarily. Just as close as you can --

Interviewee: He's giving me a lot of room here.

Interviewer: Yes.

Interviewee: The one thing I hate to do is give you false information. I would be giving you false information if I tried to pin down a five-year period.

Interviewee: He's not wanting that. Right?

Interviewer: No, I mean --

Interviewee: Just general.

Interviewer: If any -- we can --

Interviewee: Yes.

Interviewer: We're going to -- we're going to sort of build, slowly build the picture of red tides and we probably, with other information and other interviews, we can -- we probably can match yours up with others and say, "Oh, this might have been the one that you were talking about that happened in such and such a time." So if you could -- if you could mention them and then just give us --

Interviewee: One thing I can tell you is that we had red tide offshore of Chokoloskee this year. It's not there now.

Interviewer: Can you show us what area?

Interviewee: Just recently, wasn't it? Like three months ago?

Interviewee: Yes, see. They know that right in the inland areas of Marco north, there was ride tide. We didn't get red tide anytime inland --

Interviewer: Right.

Interviewee: -- here, south of Marco. My nephew is running my dad's stone crab boat and they had red tide out there. They didn't get a bad dose of red tide. When it's bad, that means a lot -- see, a lot of those fish don't come to the top. They're on the bottom first.

Interviewer: Right.

Interviewee: That usually means that stone crabs don't get in the traps because they have plenty of food. There's plenty of food on the bottom, as far as I know. I've heard stories that red tide was bad enough that they believed it killed stone crabs. My dad and us never seen nothing like that.

Interviewer: I've heard of fish kills but I --

Interviewee: Stone crabs can usually survive red tide.

Interviewer: Fish kills offshore but we don't know if those fish drifted from Marco --

Interviewee: Yes.

Interviewer: -- on the surface. *[overlapping conversation]* [00:13:47]

Interviewee: The way you know they drifted is they're rotten. These fish are fresh and they were *[indiscernible]* [00:13:58] Right here off whatever --

[00:14:00]

Interviewer: Can you show us on the map, please?

Interviewee: Yes. Yes.

Interviewer: You can write on these.

Interviewer: You can draw it -- draw on it more or less the area or --

Interviewer: You can draw on here, like a --

Interviewee: Let's see here.

Interviewer: You can -- we can lift it up so you can see.

Interviewee: Well, this here is, of course, they go even offshore of this. This area out here, this is -- this is Chokoloskee Pass, there's Jewel Key. Right out here. Your map doesn't even -- your map doesn't even go -- they go quite a bit --

Interviewer: South. Yes, it's more south.

Interviewee: They go quite a bit south of this. They saw red tide, say --

Interviewer: So, that is more smaller.

Interviewee: Yes. This is -- they saw red tide, let's say --

Interviewer: Here.

Interviewee: -- off Lostmans River and I can't even read that, even with my glasses on.

Interviewer: Yes.

Interviewee: They saw red tide south of Lostmans River, or, and south offshore as far as 20, 30 feet of water, which is 20 miles, 15 miles out. They had lines right in here against the park line, which is only a mile and a half, two miles offshore and they're red tide. They saw red tide offshore.

Interviewer: How far offshore again you said? Ten?

Interviewee: Probably 10 to 15 miles.

Interviewer: 10 to 15 miles?

Interviewee: Off the coast.

Interviewer: When exactly did they notice that?

Interviewee: That's a good question. I'm going to say he told me about it November.

Interviewee: Yes. I'd say it was about three weeks ago --

Interviewee: Yes. Yes.

Interviewee: -- that heard about it.

Interviewee: Yes.

Interviewer: Do you know how long it lasted?

Interviewee: Not very long.

Interviewer: A few weeks? A few days?

Interviewee: Probably a few weeks.

Interviewer: A few weeks?

Interviewee: Yes. Just keep in mind they didn't have a bad case of red tide.

[00:16:00]

Interviewer: Right.

Interviewee: When it's bad, it would be prolonged. So, it was just like a kill and then fish rotted away and they were on fish catching. They have a bad year anyway. I don't know if there are issues are red tide related or not. I'm just saying they're having a slow year for stone crabs. I'll tell you what. The guys north, they're having a real bad year stone crabbing.

Interviewer: Yes.

Interviewee: Real bad.

Interviewer: The main red tide.

Interviewee: Yes. Yes. Yes.

Interviewer: Are there any theories that fishermen have regarding why the -- the stone crabbing is so bad this year relative to other years?

Interviewee: Again, I haven't -- I'll tell you a person -- have you tried to -- I'll tell you a person who would be a wealth of information for you guys.

Interviewer: Who is that?

Interviewee: It's the mayor of this city.

Interviewer: From Graham's Stonehouse?

Interviewee: Have you talk to either of --

Interviewer: We tried but we can't track him down. He seems very busy.

Interviewee: Howie is also the --

Interviewer: Do you have like --

Interviewee: He owns Graham's --

Interviewer: Yes.

Interviewee: -- and he's the mayor.

Interviewer: The mayor, yes.

Interviewee: Have you met Justin? Justin is the son.

Interviewer: I was trying to get him but he's busy, too. Do you have any kind of number because if you call the Stonehouse --

Interviewee: The only --

Interviewer: -- they're like call tomorrow. They're never there.

Interviewee: The only number I would have to give you is the number that 3222, which is the 695 number. That's their business number.

Interviewer: Yes. No. I have that one, yes. *[overlapping conversation]* [00:17:24] Maybe we'll just kind of pass by and --

Interviewee: You tried city hall? Like I said, he's the mayor.

Interviewer: I called the city hall, too.

Interviewee: Well, keep trying.

Interviewer: We'll keep trying but --

Interviewee: He might not want to talk to you guys.

Interviewer: I don't think so. I just think it's just the information didn't get to him.

Interviewee: Yes.

Interviewer: So, I kept trying to get a hold of him to -- to explain what we're doing but I don't think -- it seems that he's very busy running things.

Interviewee: He is.

Interviewer: Yes.

Interviewee: He's got a lot going on between the season and between being the mayor --

Interviewer: Yes. Right.

Interviewee: -- and all that, so.

Interviewer: Yes. Keep working on it.

[00:18:00]

Interviewee: Yes. That would be a guy that would be -- I'm telling you. He could tell you a lot about what you're asking me. With me, my own father lives right next to me and we talk once a month. I mean we're not against each other. It's just that --

Interviewer: Right.

Interviewee: -- I don't keep up with his business. He don't keep up with my business. Yes. It's just not -- I'm not -- the information I think that you're looking for. I think you're looking for somebody that's out there.

Interviewer: Well, we want -- we're interested in the information, historical information, too.

Interviewer: Right.

Interviewee: Yes.

Interviewer: So, we're building a historical picture of red tides, all up and down the west coast of Florida by talking, by interviewing -- through interviews. So, as we -- everybody gives us a little bit what they know and we can build that picture and then match it up with other things that have happened --

Interviewee: Yes.

Interviewer: -- to try to better understand what might be causing the -- these different big *[indiscernible]* [00:18:57] and stuff.

Interviewee: Most people, probably you all included. A lot of people believe that some of the issues that red tide is being aggravated by our water issues in the state. So, again, I follow one group on Facebook, Captains For Clean Water. You follow them?

Interviewer: Yes.

Interviewee: So, I try to kind of halfway keep up with all that but its just like anything else. They want to -- you got one group saying, "No, this isn't it," or, "This is it."

Interviewee: To me, it's awful funny that the area where they -- areas where they dump the water get the red tide and --

Interviewee: Yes.

Interviewee: -- on the coast and south of here like south of Marco, there is no red tide.

Interviewee: *[indiscernible]* [00:19:45]

Interviewer: Right. Right.

Interviewee: Coming out of Lostmans, Rogers, Chatham. All that comes directly out of the Everglades.

Interviewer: Right. Right.

Interviewee: I believe that it aggravates the problem.

Interviewee: Yes.

[00:20:00]

Interviewee: The other thing is when the algae blooms, I believe it's got something to do with the climate. It's hotter. So, therefore, there's more algae blooming.

Interviewer: Since when did you notice that it's changed in that --

Interviewee: Two or three years ago.

Interviewer: Two or three years ago?

Interviewee: When they started with the big algae blooms. I watch videos on Facebook and I've seen fishing guides out at Lake Okeechobee. One I can remember is Scott Martin, Roland Martin's son. All around Lake Okeechobee, there hasn't been an algae bloom. In Lake Okeechobee as far as I know, there's not been an algae bloom. Once the water leaves Lake Okeechobee, it goes to the coast. All this is because they don't want to send the water south through the sugarcane farms. My opinion on one way to filter that water is, which is nothing to do -- well, it does have something to do with this. Sawgrass sucks up the nutrients out of the water. If they would burn all the sawgrass in conservation areas A, B and north of Lake Okeechobee, then the new shoots, they will regenerate itself. The new shoots are going to suck up all those phosphorous and all the fertilizers and chemicals. That would clean that water before it flowed south into the Everglades National Park. Nobody mentions Everglades National Park. Everglades National Park doesn't want that water from Lake Okeechobee --

Interviewer: Right.

Interviewee: -- through the cane farms into the park.

Interviewer: No, they don't.

Interviewee: So, they're diverting it. Well, when they're diverting it, then they're ruining economically, especially the west coast of Florida for the tourists and the hotels and the captains and they're killing the fish. To me, it would be better off to kill a few birds in the Everglades than kill the fish and hurt the economy.

Interviewer: Interesting.

Interviewee: Yes. Who wants to -- who wants to sit on the beach with dead fish around them?

[00:22:00]

Interviewee: I mean if they would burn all that sawgrass every other year or just big patches of it, then it would soak up all those nutrients. They form all these committees and they got all these scientists and they are getting some information but this takes too long.

Interviewee: Yes.

Interviewee: That's a natural thing. Years ago, goes back to years ago when the people hunted out in the cypress or the Everglades, the hunters at the end of every season would light it on fire.

Interviewee: Yes.

Interviewee: Everything was fine. It's when they come in and start managing it. Just like the animals around here and big cypress at the park service. They took away netting in the national park. There's nothing improved in the 30, 40 years since they did that. Yes, they stopped the netting but it hasn't changed -- there's not as many red fish around as when I was a kid at Flamingo. We used to go down there and --

Interviewee: In Flamingo?

Interviewee: 200 to 300 in a day.

Interviewee: We were just talking about -- yes. Flamingo, for whatever -- I have clients that fish with us and they fished Flamingo for three days and they said it's the worst fishing they've seen. They don't -- they've been doing bad the last two or three times. I was just telling them the small red fish and the small grouper's plentiful right now in this area as I've seen in a long time, so.

Interviewee: Which is funny because you -- you see, there are migratory fish. Not snook necessarily. The red fish are migrating. They migrate. There's a few residential fish throughout the year but those small anchors we call them, 12 to 14 inches, 16 inches, they migrate north and south with the weather, just like a lot of other fish but they don't migrate in federal waters. They mark the coastlines.

Interviewer: You're also a charter?

Interviewee: I'm a retired --

Interviewer: You're retired?

[00:24:00]

Interviewee: Yes. As well as an entrepreneur.

Interviewer: You've worked for many years before on --

Interviewee: Yes, but on the east coast.

Interviewer: Oh, on the east coast.

Interviewer: Oh, you always did work on the east coast.

Interviewee: Which over there, it never was a problem. Wasn't this year the first time they had it on the east coast, that I can remember, along the beach area?

Interviewer: Supposedly, yes.

Interviewer: Yes, I think so.

Interviewee: Again, where that water was let out.

Interviewer: Yes. Much -- yes. Yes. Small event.

Interviewee: They want to blame it on the farmers but I don't know --

Interviewee: If that's what it is.

Interviewee: Well, this -- the group we follow, the Captains For Clean Water, they're pretty much chanting one -- they want the water sent south, just like you're talking about. That's the --

Interviewee: That's where it belongs.

Interviewee: Yes. Yes. So, and like Skip said, that may not happen easily, so. It could be a lot cured by putting that water this way.

Interviewer: What do they -- yes.

Interviewee: All of this started like in 1947 but I hear it from my family. My family came to Larkins, which is south of Miami, in 1918. There was a hurricane and it flooded Hialeah, flooded a lot of Miami. Miami *[indiscernible]* [00:25:10] You don't see a natural lake in the Miami area.

Interviewer: No.

Interviewer: Right.

Interviewee: It gets dug and then they build houses and roads and same thing with all these canals, anywhere there's a canal. They changed the natural water flow. Down in Flamingo, the road going from Florida City to Flamingo national -- Flamingo at the end, that road there's holding up water that's supposed to go south. They don't need to build \$100 million bridges. If you go from here to the 40-mile bridge, about every mile they got little bridges to let the water flow underneath. That's all they need. They stopped that water flow. So, they stopped the whole natural process.

Interviewer: Well, they opened, right, part of the Tamiami canal but that didn't help much.

[00:26:00]

Interviewee: Well, they built those bridges which I cross all the time because I go to Miami once a month. Then they got the flood control canals right next door. So, they're still controlling --

Interviewer: Yes, but, I see.

Interviewee: -- the water going through.

Interviewer: Right.

Interviewee: They control it now. I also know that that South Florida Water has sensors all down the coast from, I'll say, the Rookery Bay. I know for sure because I looked at them on the internet but I lost the website address. All the way to Miami where they have sensors that they read what's in the water. They read the phosphorous. They read the chemicals.

Interviewer: Yes.

Interviewee: That's never publicized. Not that it's bad but they're kind of getting a reading on what --

Interviewer: Yes.

Interviewee: -- should be there and what shouldn't be there.

Interviewer: Right.

Interviewer: Right.

Interviewee: The whole thing is lots of things in this country comes to big money.

Interviewer: Yes.

Interviewee: If I owned a sugar company, they would be fining me every day until I either cleaned it up or they'd close me down. Why is it that for those few companies we are trying to accommodate them? We don't need the sugar. We don't need to subsidize the sugar. I mean it's a whole big picture. The main thing is they're not letting the water go south where it naturally always went.

Interviewer: Yes.

Interviewer: Right. Right. So, can we go back to talking about historically --

Interviewee: Yes.

Interviewer: -- when you were crabbing? What red tide events you saw? Like what's the first one that you remember?

Interviewee: Probably early. My first year crabbing was '85, '86. I guess we would've had red tide even then. Again, to pin down the year with the -- we're talking about 30 some years ago.

Interviewer: Yes.

[00:28:00]

Interviewee: So, for me to pin down the exact dates. I would say that sporadically every three to four years we would have an event through the -- from that time period right through till I quit crabbing in '80 -- in 2006 that I could remember red tide events offshore.

Interviewer: Was there an area, a specific area, where you would generally see these red tide events or?

Interviewee: Well, my area would run from -- I think it's somewhere north 30, 30, on the 30 line north which is off Lostmans River to -- I fished down to Cape Sable which is roughly the 12 line on the top under 25 parallel. I would say that that was not uncommon to see red tide in that 20 mile, 18 to 20 mile stretch. Of course, I would crab as far out as -
-

Interviewer: It's not on the map? We don't have -- that's -- is that on our map?

Interviewee: Yes, it's south of this.

Interviewer: We have -- we don't have that other map that goes --

Interviewer: Yes. It's too small.

Interviewer: What about that other big map?

Interviewer: Would the other big map -- do we have that?

Interviewer: We do. It's in the car.

Interviewer: Should we get that?

Interviewer: Yes.

Interviewer: Yes.

Interviewer: I'll get it.

Interviewer: It's just the other map that we have.

Interviewer: What part of Miami are you all from?

Interviewer: Yes. We're all right on Key Biscayne.

Interviewee: Key Biscayne?

Interviewer: That's where our offices are located.

Interviewee: Oh, yes. Right there before the bridge?

Interviewer: Yes, yes, yes. Well, right after the bridge.

Interviewee: Yes, that's right.

Interviewer: Before the bridge to Key Biscayne on Virginia.

Interviewee: Before *[indiscernible]* [00:29:35]

Interviewer: Yes.

Interviewee: Yes, on Virginia.

Interviewer: Yes, right on *[indiscernible]* [00:29:37] So, we have like a bigger version. We have a zoomed, huge version of this guy. So, maybe that will help you out.

Interviewer: Yes. No, I have the --

Interviewee: I can't even see that thing.

Interviewer: Yes, I know.

Interviewee: I'm like goodness.

Interviewee: Can you tell Matt to bring the paper? Matt?

[00:30:00]

Interviewer: Matt, can you bring the paper, too? Yes, I think I want to spend -- there's a more detailed map of the Everglades area. I almost want to like email it to you --

Interviewee: Yes.

Interviewer: -- and maybe have your nephew draw the area that he saw, if that works out.
[indiscernible] [00:30:20]

Interviewee: Yes. They were saying they're having a hard time getting a hold of the mayor. These crabbers come and help him every day and they're seeing this stuff. So, he would be, like I said, good information.

Interviewer: Well, we'll just try to get him today and see if we can see anybody.

Interviewer: We can call back after.

Interviewee: I wonder why it occurs offshore every year but not in-shore.

Interviewer: Might have to turn it up a little bit.

Interviewer: Can you pass the *[overlapping conversation]* [00:31:11]

Interviewee: This is good for me.

Interviewer: This is good? Let me put the --

Interviewee: There's the pavilion right there. There's Norwest Cape.

Interviewee: *[indiscernible]* [00:31:39]

Interviewee: Is that what we're doing? Clipping?

[00:32:00]

Interviewer: Let's put it a little more -- yes, that's fine.

Interviewee: Yes.

Interviewer: Yes, that's good.

Interviewer: You want me to do this one?

Interviewer: No, that's perfect. That's okay. It's fine.

Interviewer: So, if there are areas or one area or multiple areas where you typically -- or where maybe you've seen these, you know that you saw these?

Interviewee: The red tide events?

Interviewer: Mark -- yes, the red tide events. If you can map them, mark them on the map.

Interviewer: Yes. If you know like the extent of them kind of, if you could draw like a shape kind of like a circle or even a square or whatever you think kind of contains the area that you've encountered red tide. Then, ideally, if you knew that you saw this area for sure in the last five years or the last 10 years or any -- any kind of time period.

Interviewee: Again, I haven't been -- I haven't seen red tide.

Interviewer: Yes.

Interviewee: Yes. Not in the last five years.

Interviewer: Not in a long time?

Interviewee: No, 15 years.

Interviewee: Right. Right Right.

Interviewer: 15 years.

Interviewee: Yes.

Interviewer: So, areas --

Interviewee: Yes.

Interviewer: We've had other interviews just like this where we just are looking at the areas.

Interviewer: Wherever. If it's untypical or you just remember seeing it in that area, if you can, put the exact time on it that's fine. It's still helpful.

Interviewer: Yes.

Interviewer: Definitely helpful.

Interviewee: Well, this is Lostmans River right here. That's basically -- and it goes -- this is roughly -- I think we're on the 40 -- is this the 40?

Interviewer: It's the 30. No. Yes, this is the 30, the one you're touching.

Interviewee: Right here?

Interviewee: This one, yes.

Interviewee: This is the 30?

Interviewer: Yes.

Interviewer: Yes.

Interviewer: The 40 is like the other one back here.

[00:34:00]

Interviewee: Well, that's basically -- yes, the 30 this way. What are we this way?

Interviewer: This is 30.

Interviewee: All right. Well, that's it. I would say from -- from here to -- and this is, what, the 20?

Interviewer: Yes. No.

Interviewee: Right here?

Interviewer: 28? Is that what it says here?

Interviewee: What is that?

Interviewer: 82 I see on here. 82.

Interviewee: Yes. That says 82. 40, 30.

Interviewer: So, yes, that one is 82, the one you're touching.

Interviewee: We're 30 -- we're 30 here and you have --

Interviewee: Interesting.

Interviewee: I'm confused.

Interviewer: You're lost, right?

Interviewee: I'm lost. This should be somewhere and it's showing 10 feet, 11 feet of water, 12 feet.

Interviewee: It's down here, isn't it? That's point B. This is 30 feet out here.

Interviewee: Yes. Yes, which is roughly --

Interviewee: You got to really look under here. Here's 20, 24, 23.

Interviewee: Yes. Yes.

Interviewee: It's going to be in this square, I think.

Interviewee: Yes. This is -- this is basically in the 25 of that, yes.

Interviewee: That's a -- yes.

Interviewer: Yes. It's not a -- it's not the best.

Interviewee: That's a little bit of a problem, yes.

Interviewer: Yes, it's not the best.

Interviewee: Yes, I'm going to go back down.

Interviewer: I mean I can see where it's starting probably.

[00:36:00]

Interviewee: I would say these are five miles, right? These plots? 33.

Interviewer: It says here.

Interviewee: Yes. I would say that this is.

Interviewee: Let's see that. Where is the --

Interviewer: Yes, the scale.

Interviewer: The scale.

Interviewee: Yes, this is it.

Interviewee: Yes.

Interviewee: We're good. This area here in the 30 and roughly the 3010. This is it. This is -- this little area right here was my crabbing where I saw red tide. The further in we came, red tide was never --

Interviewer: Can you draw the lines here?

Interviewer: Yes. Yes. If you can draw the lines. It doesn't have to be --

Interviewer: So, this was about 15 years ago you said, that you --

Interviewee: Yes.

Interviewer: -- noticed?

Interviewee: Yes.

Interviewer: So, but this area is one of the areas where you said every three to four years -
-

Interviewee: Yes.

Interviewer: -- you'd see a red tide event?

Interviewee: Yes.

Interviewer: Yes.

Interviewee: Not, like I said --

Interviewer: So, it's --

Interviewee: As you can follow the coastline, it's just more -- let's see. Where's --

Interviewee: Up until 2006.

Interviewee: Here's Chokoloskee right up here. Cape Romano. It's rare for red tide situations through the years. When we would hear people getting red tide from Cape Romano north, we never saw red tide in close over the years.

[00:38:00]

Interviewee: I saw red tide out here. How much of that -- and it was red tide.

Interviewer: Yes.

Interviewee: Like I said, it wasn't dead fish floating. It was fish coming up and --

Interviewer: Certainly.

Interviewee: -- and dying.

Interviewer: Where? Sorry.

Interviewee: Out there.

Interviewer: Oh, in here.

Interviewee: Yes.

Interviewer: Are there any other areas that you remember ever having seen one?

Interviewee: Well, that's -- this is my main area right here that I fished, which that's quite -- you don't realize this is a big map. That's 20 miles. From there to there is 20 miles. So, that's why it's such a -- such a big map. That was my area from the 10, 10 to the 30 out to 40 feet of water roughly and to the shoreline. We fished -- you got -- I would go as far as the Norwest Cape in close with my crab lines. So, that's really -- that's about it. Like I said, on rare occasions, we would get red tide maybe -- I don't know how you would --

Interviewer: Yes.

Interviewer: It was more often occurrences. So, sometimes -- so, do you remember an event like that was like spread all through this area? Came all the way here? And what --

Interviewee: I sure couldn't -- I sure couldn't tell you the exact times. I mean --

Interviewer: When it was more extended like that, did you see other species? Like what species did you see effected in this more often occurring events?

Interviewee: What species? Groupers, snappers, catfish, mullet, red fish, even red fish.

[00:40:00]

Interviewer: All of those got killed in the red tide?

Interviewer: So, you would see dead fish like to the surface?

Interviewee: Yes.

Interviewer: Yes.

Interviewee: Oh, yes.

Interviewer: When it would be more extensive, do you see other species that would -- that --

Interviewee: Oh, yes. I mean you might see a, what you call sand perch, squirrel fish. You'd see anything. Anything would come up. Believe it or not, catfish are highly susceptible to red tide. They'll be dead everywhere.

Interviewer: Yes.

Interviewee: Your hard heads and your *[indiscernible]* [00:40:30]

Interviewee: Not really any migratory fish like kingfish.

Interviewee: Yes. Yes, not that kind of stuff.

Interviewee: Mackerel.

Interviewee: Goliath groupers floating everywhere. Giants during red tide. Yes. Yes.

Interviewer: So, these events, how long would they last? When they occurred like, what, weeks? Months?

Interviewee: I would say, yes, weeks not months. It wasn't -- it wasn't months on end. No. It would be a period of time that you'd see two, three, four weeks you had dead fish. Yes. Without testing the water to see what kind of -- the oxygen level or anything like that.

Interviewer: Right.

Interviewee: Just seeing -- what we looked for --

Interviewer: When you would see it, yes.

Interviewer: -- when the fish weren't coming up fresh. If we saw fish that were fresh, we knew the red tide was still there. If we saw a lot of dead fish that was rotting, we knew that it was over and they were just *[indiscernible]* [00:41:29]

Interviewer: So, this area represents the area that this is where you've seen red tides like over time?

Interviewee: Over time.

Interviewee: Have they ever spanned -- have you ever seen a red tide that was large enough that it spanned this entire area where it would be like east of it or?

Interviewee: I would say yes, I've seen red tide in that entire area.

Interviewer: Yes.

Interviewee: Keep in mind we traveled. Chokoloskee and the Everglades is right here.

[00:42:00]

Interviewee: We traveled out to our lines like this and we would see red fish. Like I mean I hardly ever -- I hardly ever got north of the 40 line. I never went north of that but my area, that pretty much covered my crabbing area where I was pulling traps and right on into here. From that point in, it was rare to see any dead fish.

Interviewee: Your dad still crabbing out there?

Interviewee: Oh, yes. Oh, yes.

Interviewee: Have they seen a red tide this year?

Interviewee: This year.

Interviewer: So, the red tide that you said you -- they were discussing from this year was also out in that same area?

Interviewee: Yes.

Interviewer: Yes.

Interviewee: Yes. Yes.

Interviewer: Now, was there ever any time where the red tide impacted the way that you were fishing or crabbing? Like you had to work around it or you didn't go or?

Interviewee: I would pull my gear that happened to be in closer. Like I had lines from here -- say my lines would run like -- I would have lines -- say, say if I had seven lines of traps. I might have one, two shorelines which was anywhere from 15 foot of water in. Then I might have one, two lines that I considered 20-foot area lines. One, two, that's six in the 25 to 30-foot area. Then 40-foot, one, two lines out there. So, if I had four lines in this area, I would concentrate my efforts where there wasn't red tide until I saw *[indiscernible]* [00:43:38] fish.

Interviewee: You were trying to out fish the red tide.

Interviewee: You tried to stay away from it.

Interviewee: Moving around?

Interviewee: Or I would take --

Interviewer: If you saw the red tide, then you would try to move your traps out of that?

Interviewee: I might try to take two of my lines that had the shorter ropes and take them in and fish this area here to get away from the red tide event. That's what I would do. So, I didn't have every single line.

[00:44:00]

Interviewee: If I had four lines in it, I would have four lines out. Then I would take two and I would have six lines that worked through the red tide.

Interviewer: Did you -- did you notice anything different about -- well, you haven't been on the water that much here. Did you hear anything different about this event compared to past events in terms of the water coloration, species?

Interviewee: No. You're talking about the red tide that happened this year?

Interviewer: Yes.

Interviewer: Yes.

Interviewee: Again --

Interviewer: Yes, you haven't been --

Interviewee: I haven't been talking to my father about the specifics of it.

Interviewer: So, was there any time when you thought something happened then it might -- we might get a red tide? Something that queued you in that there might -- there might be a red tide coming?

Interviewee: Here. One second. Let's try something.

Interviewer: Call your dad?

Interviewee: Out of curiosity myself. I know the boat was in today. They didn't go today. They must be -- one of my mom and dad's favorite things is to go to the Indian gaming casinos. So, they're probably --

Interviewer: Really?

Interviewee: Not there. Not there.

Interviewer: Let me try.

Interviewee: See if he'll answer. Never know with him.

[00:46:00]

Interviewer: Oh, that's okay.

Interviewee: I don't know anybody. I know the mayor and can't get in. He can't, either.

Interviewer: We'll keep trying. We'll keep trying.

Interviewee: Yes.

Interviewee: Yes.

Interviewer: If you talk to your dad and find out, maybe you can give us -- we can call back and --

Interviewee: Yes.

Interviewee: Yes.

Interviewer: -- you can give us some information, that's be great. Yes, that's great.

Interviewee: Did you go over and talk to anybody over here at the fish house over here?

Interviewer: Which fish house?

Interviewee: There's one right over here on the river, the --

Interviewer: Camelia Street, the Hamilton's.

Interviewee: Right. Next to Hamilton's, yes.

Interviewer: Hamilton's.

Interviewee: Or if you drove down along the river, you'll -- you might catch some crabbers loading or unloading their boat.

Interviewer: Right.

Interviewer: Right. Right Yes. That's -- we need to do that.

Interviewer: Yes.

Interviewee: If you want to talk to Justin Graham or Howie Graham, best chance to catch them is at their -- at the fish house.

Interviewer: At the fish house. Yes, that's why I thought we should just pass by at one point.

Interviewee: Yes. There's some detailed information --

Interviewer: Yes.

Interviewee: -- that those guys to give them that you're not getting from us.

Interviewer: Yes.

Interviewee: So, I mean inland, all my stuff, fishing's inland. We have had fantastic fishing and no red tide. I'm just letting you know. I mean, so --

Interviewee: So, the red tide hasn't affected the industry of fishing?

Interviewee: No. No.

Interviewee: The one time I've ever seen dead fish around here *[indiscernible]*
[00:47:31]

Interviewee: Well, I told them about the 2010 --

Interviewee: Yes.

Interviewee: Which has been nine years now. Get this. I don't know how many years it takes but --

Interviewee: They're back.

Interviewee: They're back.

Interviewee: It's amazing that these biologists can figure out that you can only keep the fish 18 inches, like on a red fish. Every one you catch now is 16 inches.

Interviewee: Yes.

Interviewee: They must migrate and go somewhere else.

[00:48:00]

Interviewee: I mean this is their time of year to pass by this area. Now, there are some larger ones but most of them -- and same thing with the snook. Of course, snook season is closed but you catch far less larger ones this time of year than you would in the summer and the spring. September was a good month for fishing for you.

Interviewee: Yes.

Interviewer: All right. Well, thank you so much.

[00:48:25]