Joe Smith: Okay, we should be recording. I am Joe Smith from the Beaufort Lab, here with Charles Roithmayr, formerly of the Menhaden Program with the Beaufort Lab. It's May 3, [2011], Tuesday, and I am on Ridgewood Drive with Charlie in Moss Point, Mississippi, and got some stock questions that we are going to ask. I will begin. Good morning, Charlie.

Charles Roithmayr: Good morning, Joe.

JS: Would you state your name and place of birth, just for the record?

CR: Sure. My name is Charlie Roithmayr and I'm an octogenarian. I'm eighty-two years old, and I was born in Brooklyn, New York.

JS: Okay. Where did you go to undergraduate school, Charlie?

CR: Undergraduate school was done at what was then called the New York State College of Forestry at Syracuse University, and that was my undergraduate work. Also, I continued on for my master's in wildlife management and fisheries. That was in – let's see – 1946.

JS: Okay. When did you come to the Beaufort lab? When did you begin working for the Menhaden Program?

CR: Well, that is an intriguing story of sorts. When I graduated from the New York State College of Forestry, there were no positions available in wildlife management or in forestry. However, there was a civil service position with the Department of Commerce with the Bureau of Commercial Fisheries for a position at Newark, Delaware, at which time Fred June and John Rientjes were involved in a project that had to do with a survey of the ocean fisheries off of Delaware Bay. That was inaugurated because the DuPont Chemical plant was going to release waste off the mouth of Delaware Bay, and they were interested in finding out what impact those chemical wastes would have on the fisheries in and around Delaware Bay. So, there was a certain amount of port sampling that was required to collect information on the fisheries and the fishing effort to identify that information for the DuPont lab. The information that developed from that study was that Breviirtia tyrannus, the Atlantic Menhaden, was a major fishery in and around Delaware Bay. That stimulated the program for Menhaden, but it started under the aegis of the survey of the fisheries off Delaware Bay.

JS: Okay.

CR: Fred June was able to obtain funding for a major fisheries research program on Atlantic Menhaden along the entire eastern seaboard. That then resulted in a transfer of Fred June and myself to the Beaufort Laboratory in which the first research started on the Atlantic Menhaden.

JS: Got you. Okay. How long were you at Beaufort, Charlie?

CR: I went to Beaufort in 1955 and left in 1961.

JS: Fred June was your supervisor?

CR: He was my supervisor. And John Rientjes at Newark, Delaware. There was a small office there where they operated, and I joined them. The transfer then to Beaufort – it is said in some of the literature that Fred and his staff moved to Beaufort. Well, I was the only other person until other biologists and research biologists joined the program.

JS: Okay. Okay. So, in '55, what was the program like there in Beaufort then? How many employees do you recall?

CR: At the end of it all, after a year and a year and a half in which the staff was recruited, and in fact, some of the biologists from the other research programs at the Beaufort Laboratory, which were already in existence, for example the shad program, one or two of them also were recruited to the menhaden program. So, my estimate, as near as I can recall, we ended up with a staff of about ten or so research biologists.

JS: What were your tasks and duties, Charlie, when you were there? Were you in charge of fishery dependent data?

CR: Yes, that's exactly what that was about, fishery dependent as compared to fishery independent data, which is information gathered by research vessels. But the studies were entirely dependent upon the cooperation of the menhaden industry and the fishermen associated with that industry.

JS: Okay. So, you had to set up the port sampling efforts up and down the East Coast then?

CR: Exactly. There's an interesting story, too, that having been born and raised in New York City, my family never had the need for a car. So, I did not have a driver's license. So, Fred June, when we were in Delaware, said, "You're going to have to get a driver's license because we're going to have to send you here and about to collect information." So, I went to the high school in Amagansett, Long Island, which was the first job I had to collect information from the industry. I went to the high school, got the student driver teacher to teach me how to drive, and obtained my driver's license and there I went. From that point on, after going to Beaufort, I was given the responsibility to install the port samplers which were hired for the summer months to sample menhaden at the fish plants. I'll identify those ports beginning in Maine, it was Portland, Maine. There was a processing plant, not a full-blown menhaden plant, but a processing plant that did utilize menhaden. That was in Portland, Maine. Then to Point Judith, Rhode Island, and then to Amagansett, Long Island, to Port Monmouth, New Jersey, to Lewis, Delaware to Wildwood, New Jersey, to Reedville, Virginia, to Beaufort, and to Youngs Island, and to Fernandina Beach, near Jacksonville in Florida. So that was an interesting position to connect with all of the summer port samplers. Take them to the plant sites and teach them how to measure, weigh, sex, collect scale samples, and obtain associated information from the fisherman on the purse seiners. This was a unique experience, to say the least, but I enjoyed every minute of it.

JS: Well, it predates interstate highways, the Internet, of course.

CR: Yes, that's right. Route One was the highway that I used to drive all the way fromPortland, Maine to Fernandina Beach, Florida. But it was an interesting experience. The geographical range, of course, of that Atlantic stock was all the way on the East Coast from Maine to Florida.

JS: You mentioned Amagansett, Charlie, and there's an area up there, I think it's called Promised Land.

CR: That's correct.

JS: Any idea how that got its name Promised Land because there's a Promised Land in Morehead City. I was wondering if there's any –

CR: Let me try to answer your question there, Joe. The fisherman, most of them, or many of them were from Tangier Island in the Chesapeake Bay. They were a religious folk, and I think that the name was given by the fishermen because Promised Land was where the plant was about ten miles outside of Amagansett. Amagansett was my first duty station under the Menhaden Program to sample the catches. I became very closely involved the with the fisherman and with the industry. Fred June took me, initially, to meet Mr. Gilbert Smith, Sr. to tell him what my responsibility was, and Mr. Gilbert Smith was very generous in saying, "Well, since you're gathering research information, you can occupy the guest room on the second floor of the office, and you can eat at the cafeteria." So, my room and board was all taken care of.

JS: Wow. Interesting. You touched on briefly, about meeting the Smiths. I guess you would call them the captains of the menhaden industry.

CR: Yes.

JS: But my impression is the lab has always had a very good relationship, but at least we have never been restricted from getting samples from the industry and they have almost wanted us there on the docks acquiring the samples, and they have been good about giving us their landings data and their logbook information. I have always had the opinion they knew they were going to be managed and they wanted to be managed with good data versus no data or bad data. It seems like, from the start, we had a fairly good relationship with the industry.

CR: Yes, that is true. What stimulated me and pleased me very much with my position as a research biologist, was that I felt that the government, under this program, was really trying to benefit the industry and the industry recognized that they would benefit. As you said, it was best to have good data about the fishery and the fish. So, we developed a very, very close relationship. I would like to mention also my relationship with Gilbert Smith senior after he extended his generosity to me for the sampling program for that summer and I went back one or two more summers in the same position. He was the gentleman that started the fishing for menhaden in the years of the Depression. He established the plant there, and they had steamers to seine for the fish. He sort of took me under his wing as a new biologist, and he showed me a

lot of things about the fish. By way of getting to that point, Mr. Smith would always go out to the plant, and he would go to where the centrifuges were that were obtaining the oil, which was a very valuable byproduct of the fish and he would – there was a ladle next to the centrifuge. He would dip the ladle and taste the oil because this oil was then loaded onto tankers to deliver the oil to Europe, where they refined it into oleo margarine. That was his quality control. Then he did something else. He took me out to the plant proper and he stopped at the pyramid of meal that was on the floor that was coming from overhead conveyor belts, the fish meal after it had been – after the fish had been cooked and dried, it was released onto the floor for stacking them into bags. He would take out his pen knife, and he would pick up the gizzard of the menhaden. Menhaden have gizzards, the stomachs, similar to mullet and other fish. He would open up the gizzard, which was one of the few things that was not completely processed. He would cut it open, and he said, "Look at the color of the material in that gizzard," which was the plankton. He said, "The color of the material in that gizzard was from a fish that was harvested in Boston Bay," because the fleet migrated all the way from Boston Bay down to New Jersey in search and to harvest the fish. Then he went to another pile, did the same thing, opened up the gizzard and he said, "You see the color of this is brown. Those fish came from New Jersey." I said, "That's very interesting, Mr. Gilbert." So, I went and checked and sure enough, the catches were from the areas that he identified.

JS: Wow. Wow.

CR: So that was something that few biologists were ever exposed to in their search for information, and this was added information that was really unique.

JS: How about that? Wow, interesting. Let me just take a short break. I just want to make sure I have captured all this and take a short break from the interview. I just want to check the recording.

CR: Right.

JS: Okay. Yes, we are doing good. Okay, part two of the interview. Just wanted to check part one and the voice levels. Looking good. Okay, Charlie. I want to talk about a couple of your publications. I've referred to them numbers of times. I cite them all the time. I go back – I call them seminal articles. I've been involved, probably in the last ten years, in computerizing the logbook information that we get from both coasts, the Gulf and the Atlantic Coast. But when I started digging in the literature, I found your publication on the logbook program that was started in the '50s on the Atlantic Coast. I take it not all the vessels participated. You might have had forty or fifty percent compliance. Could you tell us a little bit about that logbook program?

CR: Well, of course that information was required to understand the fishery, the catch and effort data. That could only be obtained by the fisherman. In particular, we went to the pilot, not the captain, but the pilot who would have the time to provide the data on the number of sets made, their location, and an estimate of the quantity of fish that they collected in each set of the seine. That was very useful. It provided us with necessary information for catch and effort analysis. It helped to determine the relative abundance of the fish each year as compared to specific areas,

notably New England or the Mid-Atlantic Coast or the South Atlantic coast. Then that continued. The logbook data continued when the Menhaden Program extended its efforts to the Gulf menhaden [inaudible]. The same method was used. To provide some additional information as to how the Gulf Menhaden Fishery began, there was a sudden decline in the Atlantic stock, and the industry sent their fish spotters down to the Gulf to see what the availability of healthy menhaden were particularly off the coast of Louisiana and Mississippi.

JS: Must have been the '60s or so.

CR: Yes. In the mid-'60s, the spotter pilots came back and said, "There's rafts of fish down there," so the nephew of Gilbert Smith Sr. was sent to the Gulf Coast. I talked with the gentleman yesterday who was born and raised in Moss Point, and he said the plant here in Moss Point was established in the early '60s, and they started up with just a few purse seiners and as they found more and more fish, they then established plants in Louisiana and I believe also on the extreme eastern coast of Texas, Port Arthur, I believe.

JS: Sabine Pass?

CR: Sabine Pass. Yes, the fishery did not extend farther east of Alabama waters or off of Florida waters. There were limitations about the purse seining in those waters. But off, what was called by Gordon Guther, a renowned international fisheries research biologist who was the director of the Gulf Coast Research Laboratory in Ocean Springs – he said it was the Fertile Crescent between Mobile Bay and Sabine Pass. He was referring to not only menhaden but fish, other species of fish, crabs, shrimp, oysters, etc..

JS: Tremendous productivity.

CR: Tremendous productivity, yes.

JS: Wow. Just back to your logbook paper on the Atlantic Coast, to me it is fascinating, and I have always thought a picture tells a thousand words and just to see those monthly catch locations in that publication, you get a real feel for the way the fishery moved up and down the coast seasonally after the migrating fish. To me, it is a really fascinating publication.

CR: Well, I'm pretty proud of that publication to provide the graphics which really gives you a good picture literally.

JS: Another publication was the aging paper you did with Fred June on Atlantic menhaden. I take it from the materials and methods from that paper you started collecting scales of course back in like '52-'53, and then you worked up the data and published a little bit later, '59 or '60, I think.

CR: Yes, well, that was one of my primary duties. Even starting in Delaware under the program for setting the fisheries out of Delaware Bay, I collected scales from the menhaden and looked at them with a binocular scope. Then, after moving to Beaufort, a full-scale fish scale reader that

you sat down and looked at a large screen to magnify the scales of the fish to determine the age by identifying the annulus or the year marks and measuring the scale and measuring the distance from the center of the scale to each annulus. That I continued to do at the Beaufort lab and I was the only one to do that until another machine was obtained and another person was hired to read the fish scales.

JS: The whole aging field now in fisheries has tended to go away from scales and otolith or ear stones.

CR: Right.

JS: Did you ever consider otoliths or ear stones back then, Charlie?

CR: No, no, because the annuli on fish scales was a tried-and-true method of aging fish, like rings on a tree, but otoliths did not become a popular method of determining the age until much later.

JS: And they were so fragile on menhaden in an industrial fishery, you'd have to take thousands of those delicate little otoliths.

CR: That's correct, yes.

JS: So, I thought that was maybe one of the reasons that scales were the main tool. I guess you had a part in the validation experiments. I think there was fish kept in a pond, juveniles for like fourteen, fifteen months to validate that first ring.

CR: No, no, I was not directly involved in that. Another biologist was involved with that, and I don't have much information on that experiment. There is a – I think Bill Hettler was involved with that. I think a paper was written on that, but I'm not certain.

JS: Okay, great. Something I have always wondered about, and we refer to this event a lot of times in our stock assessment deliberations, is the 1958-year class. If you look at our juvenile abundance indices that we've gathered from the various states, and if you look at relative abundance of year classes and strengths of year classes, that '58-year class always sticks out.

CR: It was a super abundant year class. Yes.

JS: What were the East Coast estuaries like? They must have been loaded with fish back then.

CR: They were. They were. One of my jobs was to travel to these various estuaries with a gill net. We took a small monarch outboard motor craft, and we would stop at the estuaries and look for signs of the juvenile schools, and they were in these rather shallow waters where – when they were present at flood tide, they were just very, very noticeable. Then myself and my partner would deploy the – we launched the boat, deploy the seine, and get a sample of those fish. We traveled all the way from Beaufort, North Carolina – actually, from Newark, Delaware from the

– there was an estuary there in the middle part of Delaware and continued south to Chesapeake Bay and on down to the estuaries in North Carolina, South Carolina, and Florida. That was a major effort to gather information on the relative abundance of juvenile fish, and it was labor intensive I'll tell you.

JS: Yeah, I'll bet. I think you told me one time that on your travels up the East Coast, maybe it was to shut down the port sampling efforts, that you'd like to swim in the creeks. That '58-year class was just lots of fish. Maybe they were fish kills going on. There were so many of them.

CR: Well, yes, that's right. When I was traveling and on off duty hours, I would go for a swim, and I'd be swimming amongst these juvenile menhaden. It seemed wherever I went I was surrounded by fish, either visually or in direct contact with them, but it was a superabundant year class. I don't think another year class has ever developed to match it.

JS: Some feel that maybe like in '51 or '52, there was a really good year class also just based on the ages of the fish that you had gathered, I guess in '55 and '56 looking at those fish as threes and fours later down the line. But your account of the '58 year class is really interesting, and it's always been said that that may have been the best, at least in modern history.

CR: Yes, yes.

JS: Interesting. Very neat. Let us see. Charlie, you must have been there for the fall fisheries in Beaufort.

CR: Oh, yes.

JS: To me, that was always a fascinating time in that the factories up farther north would cut out and send many of their boats to the Beaufort area to fish on those fall migratory fish. Could you tell us a little bit about Beaufort in the fall?

CR: Yes, yes. As you mentioned the fleet of purse seiners came from – in some cases they came from the Gulf of Mexico to participate in that fall fishery. They came from other plants in Chesapeake Bay and from the South, from the Southern region, from South Carolina. But there would be a fleet of fifty to seventy-five purse seiners anchored in the harbor of Beaufort. The crow's nest looked like Christmas trees, one right next to the other as they were anchored in Beaufort before they left to go to the fishing grounds. The menhaden that fostered this fall fishery were menhaden that were coming from the north end of the geographic range, and they were on a spawning run. These were large menhaden that were loaded with fish roe to spawn off of the outer banks of North Carolina as far South as North Carolina and South Carolina. That's what started the year class. The samples, of course, were obtained from those fish. The roe, which is quite delicious compared to shad roe and has always been considered a delicacy, would be available. The menhaden plants in Morehead City and Beaufort permitted the high school students to come in with clean gallon paint cans, and they could rake the roe and rake the fish to get the roe and load them up in the paint cans. The high school students would take those the roe and sell them to the local inhabitants for fifty cents a pound. This was a nice bit of change for

the students and that was the story of that. In addition to that, at the plants – inside the plant, there would always be a hot plate with a frying pan, and there would be fish roe there that was fried and available for the workers to snack on as they passed by. [laughter]

JS: Wow.

CR: Excuse me. One more point is that the roe, in some cases, almost would almost fit in the palm of my hand. They were that large. You were talking about menhaden that were two and three pounds each.

JS: Wow. What you mentioned there, Charlie – any recollections of the largest menhaden that you had seen in your collections in the '50? Because we have a few specimens that were taken off Lewes in like '57 or '58, and they must be thirty-five, forty-centimeter fork length fish? Just enormous, and they almost look like American shad to look at them.

CR: That's correct.

JS: Maybe that is how they got their colloquial name, shad in North Carolina.

CR: Yes.

JS: Can you elaborate on some of the biggest fish you've ever seen?

CR: Well, I'm really stretching my memories here. There was a picture taken of a very, very large menhaden and they were somewheres in the neighborhood of thirty, thirty-five-centimeter fork lengths, and they were unusually large. I guess those were three or four-year-old fish that managed to survive the predators out there in the ocean. Just to talk about that for a moment, predators like bluefish, they were ravenous. They would attack the schools not just to prey upon them, but just for the sheer feeding frenzy. They would push these schools right up onto the beach. Those large fish were very unique. By the way, to talk about spawning, the spawning season lasted all the way from September through March, a six month spawning period. That's a very lengthy – and that accounts for the abundance of these fish. They had such a long spawning period as compared to other fish that had very restricted spawning period.

JS: You mentioned bluefish, Charlie. You obviously witnessed a lot of purse seine landings. It has been my observations that it is a pretty clean fishery relative to by-catch.

CR: That's true.

JS: Probably the same held back then, I guess. Very little in the way of by-catch.

CR: Yes, by-catch would consist perhaps of some sharks and some bluefish. On rare occasions there would be some sport fish, in which case the sport fish fishermen really were up in arms, and they would claim without any direct evidence that the seiners were picking up fewer schools of sport fish. That may have happened on very, very rare occasions, but they didn't want those

fish. They didn't provide the material that the menhaden was supposed to provide. By the way, just to tell a little bit about the byproducts of the fish, it was primarily fish meal, then was the oil and then there were products from the fish that entered into the cosmetic industry, lipstick, for example, but there were over two hundred uses of the of the fish, so it was really a resource that had major impact on the economy.

JS: You mentioned eating fish roe in the fall, but did you ever run into anyone that actually ate fileted menhaden? Because I had run into a few folks at the Beaufort factory; some of the old timers would take some of the big fish in the fall and try to filet them out as best they could and then flash fry them, but any experience with eating menhaden?

CR: I tried it once and I just had to chew through the fine rib bones which really made it a difficult item to savor. However, in West Africa, they have a species of fish that is almost a dead ringer for menhaden. It has a large head. It's oily. And it's called the West African shad. The local name is Bonga. I was in Sierra Leone for a year working for food and development, agricultural development for the government. I served as an advisor to the government on how to survey their fisheries, primarily this one species, this Ethlamosa fimbriata is what it was called, and they used like – this was a staple for the people in Sierra Leone. They would bring them on shore from gillnets and sometimes small purse seines and they would have smokers right on the beach and they would cook and smoke them. Then they would transport them into the villages and cities and Sierra Leone was about the size of Mississippi and they transported them up to the far reaches of the country. If they started to go bad, they just smoked them again. To the people in Sierra Leone, this fish provided the calcium, the protein, and the oil for human consumption. So that was as close as I came to seeing this fish being used for human consumption. I did sample the Atlantic menhaden, and it just was too much of a problem to get through all the bones and so forth.

JS: Understand. Do you have any stories about the menhaden industry owners, Charlie? You mentioned Gilbert Smith.

CR: Yes, yes.

JS: Did you have any dealings with Howard or Otis?

CR: Very, very distant relationship. If you want to call it that. I met these gentlemen. Fred June would introduce me to them, but I didn't have the experience I had with Gilbert Smith senior because I saw him every day during the summer months. He was a fine gentleman, and he would walk around in the plant with a suit that was sort of shabby and a fedora, but he was a well-off person in the industry. I did not get to know many of the others. There was Harvey Smith. I met him a few times, but not as close to them as I was to Gilbert Sr..

JS: Got you. Okay. Just a couple of steps back – and I forgot to ask this but sometime after World War II – you mentioned the crow's nest in the boats but sometime after World War II spotter pilots came into use in the fishery. I guess they were probably well established by the ‘50s, the use of spotter pilots?

CR: Yes, yes. Well, when I started to work at the Amagansett in 1954, there were two or three spotter pilots. Because of the extent of the fishery from that particular plant all the way from Boston Bay to the Jersey Shore, the pilots would have to scout those coastal waters for the availability of fish. I flew with one of the spotter pilots, and it was very interesting experience, especially when we flew from Amagansett across New York City to go down to the Jersey Shore. We were at an altitude where we had to be well high enough to stay out of the way of the commercial airlines with the two or three airports in New York City. But that was an exciting experience because having been born and raised in New York City, I saw places that I used to frequent as a child. But then also to add to that, the spotter pilots in in the fall fishery, they had a fleet of planes of ten to twelve spotter pilots to service all of the fleet of fifty or sixty purse seiners and unfortunately, they didn't have a code of behavior, so to speak, to avoid collisions. They had not established fixed altitudes for each of the spotter pilots. On one occasion I was at the Beaufort Lab and I looked out the window and I saw two planes collide. The one pilot didn't make it, and the other pilot survived. But to go on from there, to see these fish schools from the air – the pilots couldn't see them at three thousand feet because it was just a raft of fish; they would have to go up to five thousand feet to see the individual schools. That just gives you an appreciation for what the size of these fish schools were that came.

JS: Wow. Did they have radio then?

CR: Oh, yes. Yes.

JS: They must have had radio to communicate.

CR: Oh, yes. Yes, they did have radios. Yes, that's right. To communicate with the plant, to tell them, "Hey, there's three boats that have loaded up and they're on their way."

JS: They would also set the – would they set the boats also via radio?

CR: Yes, exactly. Not just the spot, right. But also, then they would guide the purse boats, the smaller purse boats that had the purse seine spread between them. As they chased the school, there was another small boat that would visually look for the school, and he would point with his oar to the captain on one of the purse boats the direction to go, but in some cases the fish were very deep. They were not at or near the surface, and so the spotter pilots would direct them.

JS: I had forgotten all about that – would have been the striker boat.

CR: Yes, the striker boat, exactly.

JS: And they were still being used in the ‘50s.

CR: Yes, that's right.

JS: Of course.

CR: And so that sort of brought the end to the crow's nest. They did use them on occasion and in weather where the pilots couldn't fly. So, they still served a purpose. But then they went by the wayside.

JS: Got you. Okay. On to the Gulf fishery, Charlie, we touched on a little bit earlier, but you left Beaufort in '61 –

CR: Exactly.

JS: – to go to the Pascagoula laboratory. Were you involved with Gulf menhaden?

CR: Yes, I was to a limited point. My project in Pascagoula at the Pascagoula Fisheries Laboratory was a project called the Industrial Bottom Fish Fishery, which was a fishery that – shrimp boats were hired by the pet food plants that wanted fish, regardless of the species. My responsibility was to collect samples and identify the fish that were being brought in for utilization, for canned cat food. Menhaden would be also brought in, and that piqued my interest. So, I started collecting information just as a sideline on the Gulf menhaden. But then, Robert Lewis at the Beaufort Laboratory was interested in getting information about the fecundity of the Gulf menhaden. It's an extension of the research that was done on the Atlantic menhaden, and so he and I prepared a paper for publication, which was published in the Fishery Bulletin that was the spawning and sexual maturity of Gulf menhaden, Brevoortia patronus. These were studies of egg and larvae collections. It was a very small report but Robert was the principal author, and he did a good job of providing the information on the stages of sexual maturity, the age and size of first spawning, the time and frequency of spawning and the number of ovum spawned and so that was a contribution that I was involved with. In addition to that, I looked at the exploratory catch records of the research boats from the Pascagoula Lab. They had recorded species of the fish that were caught in their trawls, and they were a by-catch because they were just doing a survey of the fishery sources in the Gulf. But I looked at those records for about a five-year period and saw that this was fishery independent data on the Gulf menhaden, because in the fall and the winter and the spring, the Gulf menhaden would go offshore as far as fifty fathoms. I did a paper on the seasonal occurrence of the Gulf menhaden, which showed the gradual migration out to sea. This was a spawning run. Again, from approximately October, November through March, these fish were spawning and so it gave a picture of the seasonal movement, the migration offshore and the migration inshore at which time the purse seine season started in approximately May or April, May and lasted until October, November. So that was a small note that I contributed or published in the *Transactions of American Fisheries Society.*

JS: Those two papers [are] still cited quite often, the Lewis-Roithmayr and your seasonal paper. We are going through a stock assessment year for the Gulf menhaden and those two papers were heavily cited at the data workshop.

CR: That's good to know.

JS: Two months ago.

CR: Really? Glad to know that.

JS: Neat. Gosh, I have gotten through a lot of the science questions and industry questions, but when I got to Beaufort in the early '80s, it was sort of the tail end of a lot of the original folks that had been there, but I had heard lots of stories of practical jokes that used to go on at the Beaufort lab.

CR: Oh, yes.

JS: I think Bill Nicholson was maybe one of the big instigators.

CR: That's right.

JS: Have you got any favorite stories –

CR: There is one favorite story.

JS: – of past practical jokes up there?

CR: Yes. I rode my bicycle to work on occasion and one day, when I left to go back home, my bicycle was hung up in a tree, way high up in a tree. [laughter] There wasn't a rope attached to it. It was up there. So, I had to call Ava to come and get me to take me home. [laughter] Yes, that was one practical joke that I experienced.

JS: A dangerous time probably to be there.

CR: Yes. Oh, yes. Yes, a lot of jokesters.

JS: It must have been the old wooden bridge access through the lab. I have seen pictures of that.

CR: Exactly. Oh yes. The old wooden bridge. That's correct.

JS: Did they fish? They have a bridge net platform. Were they fishing the incoming tide with neuston nets? Was that going on in the '50s, Charlie?

CR: Yes, it was. In fact, myself and another staff member, we deployed a neuston net from the bridge on an incoming tide to collect eggs and larvae, and that was simple enough to do. These days, it would be a chore to accomplish that. But many a night and sometimes in the daytime – but it would seem that the eggs and larvae were most available at night under dark of the moon on an incoming flood tide. Then you would get the most material for studies.

JS: Interesting. I have seen pictures of that old bridge, but I was not sure if they were sampling back then with that –

CR: Oh, yes.

JS: – with that bridge platform, but what a great site.

CR: No, it was natural to collect the material.

JS: I guess that is my stock questions, Charlie. Any other comments you've got to make, feel free.

CR: Yes. Let me look at my cheat notes here. Well, just to recap a little bit. Fred June and John Reintjes, those were the first two people that I met in my first job, and they adopted me. I mean, I was a bachelor, and I had a great relationship with the two of them. I remember one incident in which Fred and John were writing a manuscript, a paper, and I would be off in a little office on the side and they were in an adjacent office working out the paper. They would have discussions, very strong discussions, about the points of the paper and in some cases they start beating on the table. I said, "My God, those guys are going to come to blows." But they got through it and they respected one another. When they disagreed, they disagreed, and the passions would get somewhat high. I think I gave you most of the high school students and Bob Lewis, the joke, the fall fishery, and the transfer from Delaware to Beaufort. It was an exciting period in my career that I really gained a lot of experience and met some very fine people in the initial stages of the Menhaden Program.

JS: Neat. Just one personal question and it gets back to the physical laboratory there in Beaufort. When you had gotten there, had the old wooden laboratory building already been demolished, Charlie, the Old Victorian building? Was that gone?

CR: Yes, it was. That's right.

JS: And the brick building had replaced it, okay.

CR: See the programs that were already in existence, the biological research programs that were in existence, there was one program on blue crabs, one on shad. Then there was a Radiobiological Laboratory, and that was a relatively new building. Then we moved in much to the consternation of some of the other program leaders and the laboratory director at that time. But we needed a place to stay and the story there is the menhaden program was supposed to have been established – the laboratory for the menhaden program was supposed to have been s built in Reedville, Virginia. Piggy Potter, I believe it was, who was the plant owner and manager at Beaufort said, "No, that laboratory belongs here in North Carolina, not in Virginia." Political strings were pulled and it resulted in the Beaufort Laboratory housing the newly established menhaden program for the Atlantic menhaden.

JS: How about that? Wow, interesting. There the program still is in this day and age, fifty-five plus years later. We're still sampling the menhaden East Coast and Gulf Coast.

CR: You are. Not "we."

JS: Yes, I are. I am the team. Well, this has all been very fascinating. I am glad we had a chance to chat. I appreciate your time and recollections, and it has been neat. I am really glad we captured this.

CR: Well, it's my pleasure too to contribute in a small way to the history of this program. I was very closely attached to it as I have mentioned, but I do want to mention once more that Fred June was the person who was able to get the funding from Washington to begin this program. He had very close ties with the owners of the menhaden plants. They managed to get that program started because before that, the states were investigating their own stocks in their own state waters, and that's no way to study a fishery that extends over a thousand miles on the coastline.

JS: Sure. Wow, great. Thanks, Charlie. I think that is it.

CR: My pleasure.

JS: Okay. Thank you.

CR: My pleasure.

JS: Thank you, sir.

CR: Okay.

JS: We got forty-three minutes on that segment. I think there was about twenty-nine on the other one.

CR: Okay, almost two hours. Not quite.

JS: Cool.

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

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