

Joseph Smith: It's July 18, [2019], 2:00 PM. We're in the NOAA Lab library for an interview with Dr. Gene Huntsman, formerly head of the Reef Fish Program at the Beaufort lab. Doing some of the interviewing will be Dr. Don Hoss, former director of the lab, Dr. Doug Vaughan, and myself, Joe Smith.

Don Hoss: Hi, Gene.

Gene Huntsman: Hello, Donald.

DH: [laughter] I'd like to start this out by – I was here when you came, but I've forgotten exactly your route in getting to Beaufort. A lot of people have interesting routes because it's not the biggest place in the world.

GH: Oh, it was kind of easy. My wife being a marine biologist, I being a marine biologist, wanted to work in the same town. We're sitting in Iowa near the end of our graduate careers at Iowa State University in the winter of 1965. It was colder than a well digger's ass in any January you've ever seen. The ground froze solid to thirty-six inches below the surface that winter. Our shower was frozen solid for ten days. [laughter] It got to thirty-five below zero on our porch. We said, "There's got to be a warmer place." I found a book published not long before then with descriptions and pictures of all the marine labs in the United States, and we started flipping through it. There was one in Beaufort, North Carolina, and it had a number of marine labs. I said, "Hey, we can find a bunch of jobs there." If you happened, also, in this whole milieu to be a devotee of the writing of Robert Ruark, who wrote the book *Old Man and the Boy*, and he described his boyhood in coastal North Carolina – say, "Well, if it's half as good as Ruark made it seem, and if we can both get jobs there, Beaufort's where we want to go." So the time came to leave graduate school. I applied and actually could have taken a job, I think heading the tagging program before Bob Dryfoos did at a higher grade than I got a year later after a year's postdoc in Miami. But it did work out for both of us to come in that first year of '66. In almost the same mailbox as some other jobs, there were two postdocs for us in Miami. I said, "That sounds way better than freezing our butts off in Iowa for another winter. Let's go do that." And using the year postdoc to become a little more familiar with the marine environment and apply for other jobs, we worked it out, where I was able to come to work here, and Sue had a postdoc at Duke. That's how we got here.

DH: Who actually – was [Gerald] Talbot director?

GH: No, Ken Henry was the director, for better or worse.

DH: I couldn't remember which one of them was here then. I should have known it was Ken. When you got here, I don't remember if you were immediately in reef fish or not.

GH: There was no reef fish program. I was hired in the menhaden program. I'm working on it now. I oversaw the whole sampling of the reef fish program. Bob Dryfoos was running the tagging. I was running the fishery monitoring part of it with Nick and Bob Chapotan and Mayo Judy and others supervising different parts of it – Chap in the Gulf and Mayo in the Atlantic, I guess. Something to that effect. A little vague now.

DH: Yes, it gets that way. Again, my faulty memory, but was there a person that was head of all menhaden, or was it the –?

GH: I don't recall an overall menhaden head. We had the assistant director, Joe Kutkuhn, who oversaw – if there was a head, it was Joe. Of course, Ken Henry was in it up to his eyeballs. We were almost a singular program. There was a vestige of the blue crab program. Shad and striped bass had disappeared down the drain already. Kutkuhn was the de facto head of –

DH: What about John Reintjes? I know he was here.

GH: He was here, but John always had these ad hoc, ex officio something jobs.

DH: Yeah, like editor.

GH: Editor. No, but he was involved in more like menhaden life history work, as I recall because he oversaw Tom – what was Tom's name? – looking at larval life history, that sort of thing. Tom went off to Maine after he left here. I can't remember his name right now. And Bill Turner. Bill Turner was here and Nick.

DH: It was the biggest single program.

GH: Oh, gigantic, yeah.

DH: Especially when you counted the temporaries. Every year, there was –

JS: Samplers and techs, yes.

DH: Techs, yeah. So then, how did reef fish –

GH: Well, we first went through the catharsis of making two labs out of one. Ken Henry managed – despite being kind of a nice guy, he had a way of doing business that made people who I think are fairly reasonable mad at him. And pretty soon, he was on such a bad list that they shipped him back to Seattle, made it one lab with –

DH: Dr. T.R. Rice.

GH: TR Rice, yes. I walked in the door and cringed. But anyhow, [laughter] overseeing it, and with that came a whole rearrangement of personnel and trying to make one lab out of two or something. I, because I knew how to spell electrophoresis, was put in charge of a marine physiology program that included such notables that actually knew what they were doing as Don Hoss and a whole bunch of other people – and Dave Peters.

DH: I remember that.

GH: Yes. Anyhow, that lasted for a year or two, which I didn't screw things up too badly, anyhow. Meanwhile, NOAA formed, and they took the marine sport fishing programs out of the Fish and Wildlife Service and brought them into the newly formed National Marine Fisheries Service in the Department of Commerce. That was, what, late 1970 as I recall, approximately. It was in a lot of fermenting as our organization tried to figure out what it was. Somewhere in the midst of all that, the idea was put to me by then-division director Jim Sykes, who had come via a circuitous route from St. Pete to DC to Sandy Hook to Beaufort – said we need to have a marine sportfishing program of some type so that we fit into the overall NOAA program. They said, “What can you come up with?” So I put together two prospectuses, one for a reef fishery program. Having observed the landings of the head boats here in Morehead City, I knew that was just a fascinating ecosystem offshore that no one was doing anything with at the time. The other prospectus was for a coastal pelagic program with bluefish, Spanish mackerel, king mackerel, that sort of thing – both of which eventually came to pass. But I gave it to Sykes – “We'll do whichever one you like best.” He said, “Let's do the reef fish program.” That's how it happened.

DH: It's surprising what I forget. [laughter] From the very start, were you the leader of it?

GH: Yes. Well, you didn't have to work very hard leading because the other half of the program was Glenn Sekavec, and I usually knew where he was. [laughter]

DH: Can you kind of flesh it out as to how it progressed? Because it was a big program.

GH: It had a life of its own and apparently still does. [laughter] As I said when we had, I think, the fortieth anniversary of the head boat survey here, the design of the reef fish program owes a lot to many pioneers in fish biology – Michael Graham, who wrote *The Fish Gate* and developed the catch equation, where you need to know what the catch is and how many are born and how many die and all this good stuff. That set the standards for what you need to know about a fishery. But also to a whole host of people associated with this lab – Fred June, John Reintjes, Nick, and others who knew how to set up a fishery monitoring program. Having come out of the menhaden program, I kind of knew the things you needed to do, and one was to begin sampling catches, and the other was to begin characterizing the nature of the fish populations. So that was the initial step that we took here. We began a catch measuring program utilizing volunteer reports from all the head boats. From the beginning, we focused on head boats because it was a very stable, well-defined sector of the fishery which used a constant fishing ground and a pretty constant gear, more or less – notwithstanding electronics, which screwed everything up. But nonetheless, it gave you a pretty well-defined population to work with. So we began with the so-called head boat survey only in the Carolinas to begin with. In those days, all the head boats were between Morehead City – that we worked with – and Charleston, and we set up the program for having catch records, and we paid a nominal sum to members of the head boat personnel, usually a mate, to daily record the number of fish of each kind that they caught. We gave them, I don't know, a buck a day or something. It was even then a trivial sum. We set up a program of dockside sampling. We did the dockside sampling of them, as I recall, three head boats here in Morehead City from this lab. We hired Bob Dixon to sample Topsail, Wrightsville Beach, Southport, and a fellow named [Bobby] “Wink” Mintz to sample in Little River and

Charleston and points in between – Pawleys Island – all the South Carolina head boats. So it was initially just this Carolina-focused program.

DH: And Bob did Morehead?

GH: Bob Dixon, we're talking –? No, Bob did Topsail, Wrightsville Beach, Carolina Beach. He was still a student at what was then called Cape Fear Technical in those days.

DH: You guys, pop in with a question.

GH: They're still awake. I can't believe it.

Douglas Vaughan: No, we haven't fallen asleep yet.

JS: A lot of the emphasis, I think, early on, which predates me – the program was life histories. I'm just amazed at all the masters' theses and PhDs that came out of the program. There must have been dozens of them, probably.

DV: Yeah, wasn't Churchill Grimes one of them?

GH: Manooch was the first. Churchill was the second.

DV: Who was the first?

GH: Manooch.

DV: Oh, Chuck.

GH: Most of us – the senior faculty here at the lab by then were adjunct faculty at NC [North Carolina] State in the zoo[ology] department or the fish and wildlife program, and that gave us ready access to eager young kind of free labor type folks, and we were able to provide meager payment. Jim Sykes didn't like to hire them as technicians. Most of them had master's degrees by then. He'd hire them as GS-7s and pay them half-time. That way, it recognized their training without giving them too damn much money.

DV: Not getting any more money than they otherwise would.

GH: [laughter] Anyhow, Manooch was the first. Grimes knew Chuck. They were the same age class. Church was a student of Frank Schwartz, working on some other project, and he'd been on it a little less than a year, and he began hanging out with Chuck and coming over and watching us sampling and riding out onto Onslow Bay to do offshore sampling. He was just fascinated – the whole thing. He went over and told Schwartz, "I want to do a reef fish program," and Schwartz said, "No, you're going to do the project that I put you on." Churchill said, "I think I'll get another major professor," and talked to (Bill Fay?) and changed major professors and began work on the life history of the vermilion snapper. Manooch was working on red porgy at that point.

DH: I think Allyn Powell was the only student that Frank had finished.

GH: I have no idea.

DH: A little bit of trivia. When I was still gainfully employed, we used to hear some discussions about how reliable is the sampling you first had done by the mate, and then in later years was – you think they gave good – I know we had some problems, but do you think basically –?

GH: It wasn't the sampling. It was the catch reporting. The catch reporting is still the same, and it's probably as good as you're ever going to get, other than a –

DH: How are you differentiating sampling and reporting?

GH: Well, I regard sampling as weighing and measuring fish, or as (Maury Wolfe?) called it, "fish squeezing."

DV: At the dock.

GH: Yeah, dockside monitoring of fish conditions – species. Then catch reporting was a daily effort by some member of the crew who had oversight of the fish coming ashore and could give a reasonable estimate of the landings of the twenty-odd species or show that regularly showed up in the catches.

DH: Did you never have samplers on board ships?

GH: Oh, yeah. We did.

DV: You did some hook survival – hooking survival studies on board? Later on.

GH: That's later developments. As we picked up personnel for other reasons, we did lots more things. But initially, it was just catch monitoring, fish condition monitoring, and then subsequently life history studies. All the biological sampling you could do at the dock supported all these life-history studies and several master's degrees and a couple – three, four PhDs. Anyhow, that fell out of it. I was going to say – I don't know. You want me to just keep going, or you want to ask questions?

DH: Yes.

DV: Yeah.

GH: Well, the initial reports and findings from the sampling in the Carolinas was found to be at least useful by the fishery management bodies, which also had come into effect not long ago. The Magnuson Act had been passed, and all of a sudden, we had fishery management councils, one in the Gulf, one in the Atlantic, both of which had chosen reef fish as in need of

circumspection and perhaps management, and they wanted data. Well, we had some of the only data that there were for reef fish, but ours was only for the Carolinas. So the word came down – you need to make this whole project much bigger. For the South Atlantic Council, you need to go to the extreme of their jurisdiction, which was Key West. Extra monies fell out of somewhere. Don't ask me where. That was always one of the interesting parts of the program, one that generated a lot of interest in the menhaden program because I think what was going on was what was politely called reprogramming. Dean Ahrenholz never got over the fact that the reef fish program seemed to grow, and every time it did, the menhaden program got smaller. [laughter]

DV: Yeah, I know Chuck was none too happy about it, either.

GH: Nonetheless, we hired samplers for North Florida, Central Florida, and the Keys, which then gave us the whole South Atlantic region, basically. Meanwhile, a head boat appeared up at Hatteras. I forget. We had a scheme for sampling. Don't ask me how we did it. I can't even remember how we got –

DV: That only lasted a few years.

GH: Yeah. But anyhow, we just expanded the program that we had here in Beaufort to cover the whole Keys, and that was – let's see – late '70s. After a while, the Gulf of Mexico Management Council got jealous because they didn't have fishery data, so they said, "Why don't you have a head boat surveying the Gulf of Mexico?" We said, "Well, you got the money?" All of a sudden, we hired samplers for the St. Pete region, and we borrowed some to sample the Panhandle out of the Panama City facility and hired one over in Louisiana.

DV: Yeah, that was more in the early '80s when that got going. '81.

GH: That might be '81. '84 sticks in my head.

DV: I think it started before I got here in '82, and the process of expanding it was still going on when I got here.

GH: Yes. And you borrowed samplers or shared samplers with the commercial fishery statistics program – that separate unit that Ken Harris, and prior to him, Harry Davis had been involved with. We shared samplers in the Port Aransas, Port Isabel area – one sampler down there and over in Cameron, Louisiana, one. Since I'm talking, that led to a really interesting story. The one in Cameron – which if you've been there, is kind of a little burg – but nonetheless, she had a boyfriend who wasn't doing her right, and she tried to run him down in the middle of Cameron while driving the government car. [laughter] [Recording paused.]

JS: One of the stories – I think you heard you doing a talk, Gene – was about how the reef fish fishery was fished down over the decades and how when you first started, the sampler would pull up at the head boat, dropped the tailgate of the pickup truck, and had this giant triple-beam balance on the back of the pickup truck to weigh the fish, and went through the progression of

different weighing devices. Now, they use a little Mettler with a little pad there to weigh the fish.

GH: There's certainly a great deal of truth in that, yeah. I don't know if those big steel beam balances are still floating around here or not. But especially when they were mining the offshore grouper populations, the average size was twenty pounds, and they went on up; they needed something that would weigh up in the scores of pounds.

DH: I remember in, say, '58 to the '60s, the big thing to do – there wasn't anything to do, so you'd go down and watch the head boats come in. They'd come in with the starboard side, but the fish were all on the port side. When they swung in to come in, they would show the fish, and they were as big as you and I. There's no empirical – this is just my remembrance, but I can't be that far off. And the last time I took my grandson out on a head boat, the biggest fish we caught was a spot[tail] pinfish, which didn't make my day. [laughter]

GH: I can believe that.

DH: So there's plenty of – well, you got real data, but there's plenty of evidence of at least reducing the size of the catch.

DV: I think during one of our SEDAR [Southeast Data, Assessment, and Review] processes, we saw pictures of head boat landings, where they're all on the stringers and everything, from the '40s and '50s and '70s and '90s and 2000s. You just see a progression from huge – still caught maybe lots of fish, but they're all little things.

DH: You might catch the occasional couple foot.

DV: Yeah, once in a while, you get a nice fish, but –

DH: You guys?

JS: Where did the Onslow Bay come in, in the '70s? I know it was built in Marshallberg.

GH: It was a (Willis?) Brothers boat, built in Marshallberg, and it was being built and bought at about the same time the reef fish program itself was coming together. I guess they just – Sykes and Ted just thought we needed some sort of somewhat offshore boat.

DH: It did replace a boat, the 12-27 or the 10-11, which were not as good by far. Similar size and very old.

GH: And the *Nancy*, which had gone by then. (laughter)

DH: Yeah, the *Nancy*. I don't know who did the *Nancy*. Were you on it when they almost sunk?

GH: No. I didn't know the *Nancy* could ever leave the dock.

DH: Well, it did once, and it almost sank out there. Fortunately, I wasn't on it.

GH: But anyhow, yeah, it was being built in the spring of '72, when we began the reef fish program. By the time we were up and running in early summer, we were making offshore trips, doing some of our own sampling, collecting life history material, basically.

DH: I remember you loved those trips. [laughter]

GH: Well, I survived them. Some of them were really great.

JS: Was Doug Willis always the captain?

GH: No.

DH: No, Donnie Dudley.

GH: Yeah, Donnie was the captain, and Doug was assigned as mate. That's how Doug got the nickname Termite. Someone went aboard one day. Donnie was never one to have dirty hands. It was not part of his job description, according to Donnie.

DV: That sounds about right.

GH: So if anything needed to be done down in the engine room, he would send Doug down. Well, they went aboard one day; someone was talking to Donnie, and they hear down below a *thump, clank, bump, thump*. "What's going on?" Donnie said, "Oh, that's termites." [laughter] And then Doug happened to stick his head up and said, "Oh, is that the termite?" He said yeah. For the next thirty years, Doug was known as Termite. [laughter] Anyhow, parts of this program – the reef fish grew out of parts and pieces. When Sykes left Sandy Hook, he came down. The big artificial reef program was being run out of Sandy Hook at that time, and Dick Stone was running it. Sykes convinced Stone to relocate with this program down here – Dick and Chet Buchanan. They continued doing artificial reef promotion and design and ballyhoo kind of thing that Dick did continuously. Meanwhile, the menhaden tagging program was changing a lot, and Pete Parker, who'd been a big operative in that, wasn't needed as much in menhaden tagging, so they shipped him over to work with Stone and Buchanan in the artificial reef program. They were doing population studies on different kinds of tire structures and things. And Pete being a bona fide first-class diver, was a strength to their program. That continued until the artificial reef program sort of began losing support and interest. Dick moved himself to DC, and I inherited then Buchanan and Parker in the reef fish program to conduct more biological studies, ecological studies. Chet didn't stay around much after that and transferred to Miami. I don't even remember him being part of the program very much. It's such a brief period. But then Pete, of course, was in the program until he retired and then running population studies – offshore observation studies. That's the way I would describe them at this point.

JS: And your study site, that 210 rock – is that about the time that became one of your study sites, when Pete came on board, I guess?



GH: Yes. Initially, when we were sampling, we would work a lot farther offshore than that. We were looking at snowy grouper and speckled hind and other things all on that 50-fathom curve sort of deal. But wasn't easy to work with diving technology then available. There are lots of other reef fish – red porgies and vermillion snapper and a host of others – at the shallower depths, like 210 Rock, which I recall is a hundred, a hundred and twenty feet. So that became their principal study site.

DH: Do you want to add anything else now? I've got more questions.

GH: Go ahead.

DH: What would you say if you were getting ready to be awarded the NOAA [inaudible] award – what's your biggest accomplishment you feel coming out of the reef fish program, just getting it going? Or was there some special part? You can think about that, and I'll ask you another one.

GH: That's hard to frame in a short answer, to say the least, you know?

DH: It is. Some people think everything they did was important. Others actually analyze it and see if they did anything important. I remember when I was here, and you guys were all here; this was quite a fun place to work, and a lot of interesting things happened. I remember, I believe, an experiment you conducted to see if you could stun fish with explosives. Did you want to comment on that? [laughter]

GH: [laughter] Yeah, that's right.

DH: I know Bill Bowen was involved.

GH: I think it was Neil Angus McNeill who wanted to work with, as I recall, spottail porgy, the young of which hunt around the dock there to the northwest of the annex, OK? He was trying to catch some and couldn't. I said, "I know how to catch them. It's not hard." The Carteret County Wildlife Club happened to have a gazillion miles of detonating cord leftover from some project – redesigning the North River marshes, which we did and has been quite successful, by the way. But anyhow, I said I can set up – I knew enough about det cord and about sampling with explosives to set it up. The real issue wasn't sampling with explosives, per se, but I wanted to make sure that the fuse I had – its match fuse – would burn underwater. Bill Bowen and I – we were both here early one morning, and Bill said, well, that's easy to find out. We'll light a piece and shove it underwater. So we filled the sink in the annex with water. Bill lit it and stuck it underwater. [Recording paused.] Meanwhile, we go out, and we do the det cord thing, which I thought our sampling permit allowed. Somewhere in the line, I'd seen the state sampling permit, and I thought it said you could do that. We put some det cord overboard, and we rolled spottail porgys up like you couldn't believe. Neil was just astounded. He was surrounded by – like didn't know what to do with them, you know? [laughter]

DH: I don't know if those things still go on around here, but that experimental type of work that was kind of off the cuff, but good. I mean, it worked. You want to reminisce on any other little incidents? [laughter]

GH: I didn't know there were any others.

DH: I remember a few. I do think that's what made this – not all of it, but some of them were what made this place a lot of fun to work at. People enjoyed their work, and they enjoyed not being so stuffy and official.

GH: Still, the potential there to take a lot more than the system's capable of producing. The council seemed to only face that grudgingly. They always, in my opinion, undergear the restrictions and keep populations dancing on the edge of disaster all the time. As long as it isn't absolutely terrible, we can live with it,

DH: Well, it continues to give them work if they don't solve anything. Something else?

GH: You asked this question – this overall contribution. I think the fact that we were the first people to pay attention to the reef fish population since Smith wrote *Fishes of North Carolina*, published in 1907, and after that, a couple of cruises of the *Oregon II* or its predecessor vessels – hey, there's some reef fish out there. And no one had done anything. We knew nothing of the populations, the life histories, the distributions, etc. There was just nothing there. And I think we kind of put the whole system on the map and documented it reasonably well.

DH: We say reef fish, and if you say that to somebody from somewhere else, they'll think of high, 20-foot coral. Can you characterize this reef out here? It's more of a flat, isn't it?

GH: Well, there's just a host of different habitats offshore here that host reef fishes. We have warm water throughout once you're more than about 25 miles offshore – sufficiently warm, anyhow. There are rock ledges. We don't have high reef-building corals, but we have lots of rock ledges. We have precipitous drop-offs at the edge of the continental shelf. We have drowned karst topography down in the vicinity of Cape Fear, a lot of sinkholes. If you cruise around down there, you go along, and all that. All these irregularities in bottom type along with some pretty firm substrates not far under the sand – a lot of limestone outcroppings, etc. – allow a good macrobenthos to establish, sufficient to make the habitat for, I don't know, 200 species or

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Reviewed by Molly Graham 2/25/2022