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Klima, Edward ~ Oral History Interview

Suzana Mic

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Voices from the Fisheries
166 Water Street
Woods Hole, MA 02543

Interview with Edward Klima by Suzana Mic

Summary Sheet and Transcript

Interviewee
Klima, Edward

Interviewer
Mic, Suzana

Date
August 17, 2016

Place
Residence of Dr. Edward Klima
Stuart, Florida

ID Number
VFF_MI_EK_001

Use Restrictions

Biographical Note
Dr. Edward Klima was born on July 30, 1934, in Catskill, New York. He began working for the Bureau of Commercial Fisheries in 1962 as a shrimp biologist. He spent time in the Panama City Lab working on gear research before moving to the Pascagoula Lab. He spent 4 years in Washington D.C. where he worked on the drafting the legislation for the 200 mile limit which became the Magnuson Stevens Act. He returned to the Galveston Lab as the Lab Director in 1977 until his retirement in 1992.

Scope and Content Note
Interview contains discussion of: Bureau of Commercial Fisheries, electricity in fishing, extended jurisdiction, foreign fleets, state vs federal waters, Magnuson Stevens Act, Endangered Species Act, sea turtles, Kemp's Ridley Sea Turtles, Turtle Exclusion Device, Texas Closure, Gulf of Mexico Fishery Management Council, estuarine ecology, satellite tracking, oil platforms, turtle observers, impact of government on science pre and post Magnuson Stevens Act, impact of technology on fishery science, relationship between Fishery Science Centers and Fishery Management Councils, United States Mexico fishery cooperation.

In this interview, Dr. Edward Klima gives a detailed description of his time working at the Southeast Fisheries Science Center, going into particular detail about his hand in creating the Magnuson Stevens Act, his work with sea turtles, and how the role of a

government scientist has changed. As of this interview in 2016, Dr. Klima was living in Stuart, Florida.

Indexed Names
Bullis, Harvey
Fontaine, Timothy
Fox, William
Goodwin, Ken
Graham, Dayton
Idol, Claire [spelt phonetically]
Lindner, Milton
Parrack, Michael
Richards, William
Seidel, William
Smith, Roland
Stevens, Ted
Thompson, Nancy
Wallace, David
White, Robert
Wickham, Donald
Woody, Jack

Transcript –EK_001

Suzana Mic: All right, now it's recording. So I'm going to put this here.

Edward Klima: Okay.

SM: From time to time I'm going to do this to make sure the recording goes, make sure it's the right sound and it's recording. Let me just make sure the batteries... Okay. So I'm going to read you the introduction and then we're going to get started. So this interview is being conducted as part of the Voices From the Science Centers Project, funded by the Northeast Fisheries Science Center. It is also part of the Voices from the Fisheries project that is supported by the National Marine Fisheries Science Office of Science and Technology. My name is Suzana Mic, and I am speaking with...

EK: Edward Klima.

SM: Edward Klima, at his home in Stuart, Florida, and the time is 12:27 p.m. I would like to let you know that you can stop me at any time, if you need to take a break or if you feel that a question is uncomfortable, you don't want to answer it, please let me know. Can I ask you, first, what is your place and date of birth?

EK: July 30, 1934, Catskill, New York.

SM: Thank you. Now, can you please tell me when did you start working for the Fisheries Science Center; in what year, and what was your position?

EK: I started in 1962 as a fishery biologist at the Galveston lab of the Bureau of Commercial Fisheries. At that time, NOAA had not been formed and I worked on shrimp research for several years at Galveston, and then I transferred to Panama City where there was a gear research group working and I worked there for several years before I moved to Mississippi and worked at the Pascagoula fisheries lab there. About that time, NOAA came into existence.

SM: That was 1970...

EK: '72, somewhere like that, yeah.

SM: Yeah.

EK: Or maybe earlier, I'm not sure.

SM: Yeah. And so, so you worked at Pascagoula, how did your career evolve? Did you stay at that lab, did you move to Miami?

EK: Okay. When I, when I left Galveston, the Director of that laboratory was Milton Lindner, a long-term, well-known shrimp biologist. And I was a shrimp biologist, and I asked Milt for a promotion from a GS 11 to a GS 12 and he was very honest with me and he said I wasn't worth it. And I thanked him. And I immediately started looking for another job. And I obtained a job for, with the Bureau of Commercial Fisheries in Panama City doing gear research. And at that time we were trying to develop an electrical shrimp trawl and they did not know how to, to use electricity and I developed a method of which we could shock the shrimp and make them come out of the substrate and into the net. And I published that, I published, published probably ninety-five papers in my career. And I stayed there and I did get a promotion to a GS 12 and they then they closed the Panama City lab and we went to Pascagoula which was a gear research and exploratory fishing laboratory.

The agency was very different at that time in that we greatly assisted the commercial industry in locating and finding resources and to improve their efficiency of their gear. And so I got very involved in fish behavior, animal behavior, and the Director of the Pascagoula lab was Harvey Bullis, a very, very great guy and really forward-thinking. And he suggested that I go and get my Ph.D. So the federal government paid for my full salary for a full year and I went to Utah State where I completed all my class requirements, my comprehensive exams, my language exams, and but not my research. And I went back to Pascagoula after a year and I finished my research which was on using electricity to control fish and the environment, because we were going to develop a fishing station where we would attract fish by using artificial structures which I developed with another friend of mine, and then to use lights to bring them in, into a field where we could control them electrically and then pump them aboard. About that time the federal government got out of trying to...

SM: What was that time?

EK: Oh...

SM: More or less, it doesn't have to be...

EK: Probably in the '70s. Early '70s. The federal government was getting out of trying to assist the fishing industry so they weren't felt like we were being bought by the industry itself. And so we, we changed that form of research and gear research developed into, which eventually got into the turtle excluder device to protect animals and not so much to help the fishermen but to protect the resource. I, at that time Harvey Bullis was in Washington and I took over as the Acting Laboratory, of the Pascagoula laboratory, and Harvey was then moved to Miami and became the Center Director. And to be very honest, Harvey and I were good friends but we also didn't like each other at certain times. And I had changed the Pascagoula lab significantly because there were no doctorates there and I started hiring people that had doctorates and to put it on more of a scientific basis. Harvey called me to Miami, about '72, and told me to get another job, he didn't want me there. And I then transferred to Washington, D.C. and worked with Ken Goodwin in the Planning Office of the National Marine Fisheries Service.

I was not a typical NMFS employee at the Washington office. I didn't write letters, I didn't do the mundane things. I was always given an assignment on a broader basis. One of the first assignments I had was on the tuna porpoise issue and how the industry should deal with this. At that point in time, we were starting to talk about extended jurisdiction. I was then transferred from NMFS up to NOAA and NOAA had a fishery office headed by Dave Wallace and we were working as a team to develop the legislation for the 200 mile extended jurisdiction. I had the responsibility of putting together the magnitude of what the resource could stand in each region, how much could be taken and how much was overfished. I did this by contacting people in each region and having them draw up draft papers for the status of the stocks for each region; the Northeast, Southeast, the Alaskan region, as well as the Pacific.

We put that, I put that together and made presentations to NOAA and to the Department of Commerce and we continued working on this because we felt it was a big economic benefit to extend our jurisdiction to protect our resources from foreign influence. Because at that time there were many foreign vessels, whether they be Russian, German, Japanese, fishing our waters and we were not able to control them through the international commissions. ICNAF [International Commission for the Northwest Atlantic Fisheries] was one of these, and it was sort of a silly game that they were playing; they would agree but they would, you couldn't enforce anything.

Also at the same time the states were trying to regulate their resources by themselves and there was a big conflict between states' rights issue and federal issues. So we ameliorated a lot of these problems and we actually developed the document that was handed to Congress for the 200 mile jurisdiction. The only difference was some stuff that came from Alaska that was changed in the document by Senator Stevens. And other than that, the document we handed Congress is what is presently known as the Magnuson Act today. And during that time I think I worked in Washington from '72 to '76, and I basically worked on that full time with a few other things but basically that was my job, working with a team of Dr. Roland Smith, Dr. Claire Idol [spelt phonetically], and myself and Dave Wallace and Dr. Bob White who was the head of NOAA at that time;

a tremendous, tremendous, administrator. I greatly admired the way he operated. And just as a side, he would have a problem and he would call, on fisheries, because he was the head of NOAA which is more than fisheries, and he would call on several fishery experts, myself, Dr. Smith, and a couple of other people and a couple of attorneys and he would lay out the problem and then he would ask everybody what their opinion was. And he would then say, thank you very much, I'll get back to you as to what I decide. He used his staff as you should effectively use a staff as a manager. And I was very proud to be an employee working for a government that operated that way.

At that point in time the Director of the Galveston laboratory was, was moving to another position and Harvey Bullis who was the Center Director in Miami called me up and asked me if I wanted the job; although he fired me, he rehired me. We were extremely close, and not close at times. And so I then took the job as the Galveston Laboratory Director in '77 and stayed there until I retired in '92. And at that time we went through another transition by the federal government changing its' position. Galveston, at the time that I took over was primarily involved in shrimp aquaculture, a little bit of ecology and not much else, okay? Again, the lab lacked the scientific quality so I started hiring Ph.D.s that would increase the quality of the organization. Let's turn this off a second.

SM: Sure.

SM: There you go. Now it's good.

EK: Okay. At that time there was an emphasis to do a lot of shrimp research. And then the federal government again thought this was too much of an assistance to the industry and we needed to get out of shrimp research. And so I had a staff of people that were fairly familiar with culturing techniques, and I said, "well there's a major problem under the Endangered Species Act, and that's with sea turtles, because there were five species in there and a couple of them were endangered." And so we started to raise hatchling leatherback, uh, not leatherback, loggerhead turtles at the lab to see if it could be done. And we were doing this for about seven, eight, nine months when I was contacted by the Fish and Wildlife Service, Jack Woody in particular, and also the National Park Service. And I met them in Austin, Texas about this time and they put a proposal that, to try to save the Kemp's Ridley Sea Turtle.

There was the Texas Parks and Wildlife, National Marine Fisheries Service, Fish and Wildlife Service, and the Mexican government involved in this. There's one nesting beach for Kemp's Ridley Sea Turtles, it is in Rancho Nuevo, Mexico. And about 1945 there was some flights over this area where there was approximately 40,000 turtles nesting arribada. At the time that we met, the nesting population was about 600 turtles. And one of the problems was they needed to protect the nesting beach, because even though they had Mexican Marines there, they didn't pay the Marines and the Marines would eat the turtles and let other people eat them. So the Fish and Wildlife Service had the responsibility of going down there, shoring up this site to pay people so they could protect the turtles and allow them to hatch. The second part was that they felt there should be another nesting beach at Padre Island, which is in Texas, and they wanted to know whether I could head start these turtles for a year and then release them.

And then, further on, we, we knew that the shrimp fishery itself caught a lot of turtles and killed them. And as a second part of this, that was the development of the turtle excluder device. So we took the part of head starting Kemp's Ridley Sea Turtles and we were taking 2,000 turtles a year to do that. And this proved to be very satisfactual. Many people said one, they won't survive in the environment after you release them. Two, they'll never grow to an adult size. Three, they'll never breed. Four, they'll never go to Padre Island, and to make a very long, long story very short, they were all wrong. They did all these things. And we were very successful in culturing the turtles, releasing them, having them grow to adults, having them come back to the nesting beach, as well as going back to Rancho Nuevo.

Now, we did this because we had microchips and we had tags and there was verification. So this was a very interesting program, but in NMFS's great wisdom, they decided we should end the program after ten years. And that's okay, because it was a research program. We were not a hatchery. We developed the technology, we did a good job. We didn't get any rewards for it, we didn't even get any accolades for it.

At the same time, the Pascagoula lab in their gear research outfit, with Will Seidel and a bunch of other people were developing an excluder turtle device, a TED [turtle excluder device], okay? We got involved in that because the shrimp fishery said they were losing shrimp and this was a detriment to their shrimping operations. We put observers on boats in the Gulf of Mexico and the south Atlantic where they would have a TED on one side and a standard net on the other side. And I can't remember the amount of data that we had, but it was a couple hundred sea days or more than that, and it was proven very clearly that there was no loss by using the TEDs. Now, during that period of time, the industry was very unhappy. They blocked the Aransas Pass from any boats going in and out. The Coast Guard was up in arms about it; they threatened my lab, they actually threatened my wife and we got through all of this in a calm...

SM: What, what year was this? Like, more or less, what period?

EK: Uh, timeframe, '80?

SM: '80, about?

EK: Something, something like that.

SM: They threatened your wife?

EK: On the phone. And, anyway, there was a, it was a very, very contentious period of time. Also about that time the federal government, and I, I had responsibility for providing scientific management for the shrimp resources of the Gulf of Mexico. About that time, the Gulf of Mexico Fishery Management Council implemented what's called the Texas Closure. What this meant is that during the period of time when juvenile shrimp were leaving the estuaries, they were small, not very valuable, the state of Texas, with the federal government, closed the waters out to twelve miles that there was no fishing allowed. And this also was a very contentious issue at that time.

And we were involved in evaluating that process which we did and I will say this, at the same time, there was a threat at my lab that they wanted to close the lab down and the personnel office from the regional office came to the lab in June, said "by September we're going to give all of you your pink slips. You're going to be fired." To say that this was contentious, I addressed my people and I said, "I don't care what they're saying, we're going to do the best job we can on this Texas closure and we're going to make everybody see that we are doing a good scientific job", which we did. And actually I wrote a paper and I won the award of the best paper that year in, whatever the journal was, which, anyway, that was a very nice thing.

So those are some of the episodes, main episodes, in my career at Galveston. And by the time I left, I think we developed a very good estuarine group of estuarine marine biologists, ecologists; we did a lot of work on sea turtles, satellite tracking, and one other major aspect came about, that in June, or May, of one year, there were a lot of sea turtles wash, washing up on the beaches of north Texas. And they were blaming the shrimpers for this, and I looked at the data and I said, "no, this cannot be." They are not the shrimpers because there is no shrimping effort at that time of year. And so we checked it out and there are a lot of oil platforms off of the Texas/Louisiana coast. I can't tell you how many at that time, but many. And they were required by law, if they weren't operating, to remove them. They way they removed them was to blow the structures apart, blow the legs off of the structures. And I said, "okay, so here's what's happening. They're removing these platforms and they're killing the turtles." And so we had enough documentation on that and of course the oil company said they never see any turtles there. And as a very funny story, we sent one of our scientists out on the platform before they were going to remove a platform, and he was looking, his name is Tim Fontaine, by the way, and he was looking over and the guy, the oil guys were saying, "what are you looking for?" He says," sea turtles" "You saw them? We never see any sea turtles!" He says, "really? What's that out there?" And it was a sea turtle.

Well, to make, again, a very long story shorter, is, we talked, or I talked to the oil companies and told them what the situation was, and that we needed to put observers on the platforms before they blew them up to make sure there were no turtles there, and we implemented this program in the Gulf of Mexico and that was probably '83, '84, something like that. So that was a very important program. While we were doing that, we did a lot of tagging of the turtles that were around the platforms using satellite tags and sonic tags. So a lot of things happened during that period of time. And I retired in '92.

SM: So you mentioned a lot of conflicts, or intense moments, in your career. Can you tell me a little bit about how you managed to overcome them? I mean you mentioned a little, but maybe expand a little, for example, on the episode when the lab in Galveston was almost closed, almost surely closed.

EK: Well, I had to rely on making contact with people that had some political clout. Texas Shrimp Association, Louisiana Shrimp Association, and they felt that we were a benefit and they had contacts with Congress. I didn't talk to Congress directly, okay? But they had contacts with Congress and they were able to put pressure on, that to, not to

close the lab. And even though we were in conflict with the shrimp industry, we did provide them with a lot of information. We would have a forecast for recruitment of shrimp each year, and, of course, we provided scientific information for the management of all the shrimp resources; that's Florida, Tortugas, the Gulf, and their three species of shrimp. And so we provided that information to them. So we were of value. So that, and from my own perspective, the power of positive thinking.

SM: So let's go back to the Magnuson Stevenson Act and if you could talk a little bit about what it meant for you and other people working at the Fisheries Science Center at this transition. How, how was fishery science and management conducted before the Act, and after, if you could describe that transition a little bit.

EK: That's a very good question. Before we got into the Magnuson Act the science was basically what you would call marine biology. We did things to find out what was going on, trying to ask "why" questions, but we were basically marine biologists, or ecologists, if you will. And it was really a fun thing because it was doing research and publishing and I always tried to get my people to publish as much as possible in peer-reviewed journals. And so that was the crux of what we had. And I think way before I even came in, it was all that type of stuff. Life history, like Bill Richards did a lot of life history on small fish, juvenile fish, and so there was a, the whole emphasis was just a question of what's in the oceans, how does it work, how it doesn't work.

When the Magnuson Act came in it started to change in a number of ways. One, prior to that, probably the regional office had one or two attorneys. Now I don't know how many they have, maybe they have twenty or thirty. And enforcement. Plus, from the scientific standpoint, as you know the regional offices have a different function than the centers, okay? The centers then changed to studies of population dynamics, more mathematicians, statisticians, stock analysis, and that was the main change. Not throughout the whole center, but that was a major emphasis. I think Miami is an example of just basically looking at it from a pop-dy situation. And that was a change. There are, you know, we still do marine biology work, I think Galveston does, I think Beaufort does, but the main emphasis has been pop-dy.

SM: Population dynamics, right?

EK: Yeah. Yes.

SM: I see. Can you talk to me, tell me a little bit about the majors or scientific paradigms in your field and how they evolved?

EK: How they evolved? Well, I think they evolved because of what Washington wants to fund or what they don't want to fund. One of the things is that, at least at Galveston, when I came there, we were underfunded. And there was a big contract and I can't even remember what it was about, and it was up for review and if we lost the contract, we lost a half a million bucks. And so we had a review and I made sure that the presentations were adequate and that we got, we continued that funding. At Galveston, we were always looking for funding and I was always out hustling to get money, whatever it could be. You know, I got money from the oil companies for blowing up

turtles, you know, and we got money for, I can't even remember all of the things, but we got money from different places. Not big money, you know, $100,000, $200,000, something like that. So at least from Galveston's standpoint, that was a mandate because if you have a talented staff, you've got to pay them and we didn't get enough money from Washington. So but Washington basically controlled the funding and then the Center controls the funding as well, as you know. And so it's not that easy to change funding today. In the past, it was pretty easy to manipulate funding. I shouldn't use that word, but it's true. [chuckles]

SM: So, so the work environment, I assume, changed after 1976 too, and you mentioned a little bit about the...

EK: Well, it didn't change rapidly, it was very, very slow. All the pop-dy people that I had, which I had a very good group, moved to Miami because Bill Fox wanted them in Miami. And I switched to estuarine ecology and I started hiring estuarine ecologists and we developed a tremendous estuarine ecological group. So we still stayed with the marine biology type stuff, by and large, except for what I did for shrimp management. And there was a few people that worked on that. And the big change, of course, was computers. Oh my goodness gracious. Wow. I was amazed when I found out that you could send something on a fax machine and you'd get a hard copy. And just as a, as an example, I had a Friden calculator, okay? And to run a growth curve it would take me all day punching in numbers. Today I can do that growth curve in thirty seconds. You know, so, the changes, and that was an evolution because everything had to be programmed. Now everything is in a can, you know, you can do analysis covariance with no problem. So there's a huge change because of the technology.

SM: That was my next question, so that's funny you mentioned it. Modeling and all that, these other technologies definitely impacted, it seems, your work. Okay, so I'm going to ask you about, a little bit about what do you think are the, some of the challenges as well as the positive, positives about working on, for a government agency.

EK: That's hard for me to answer in today's world because I don't know how restrictive it is. I do know that when I started out it was not restrictive; that you could basically do whatever research you wanted to. And I'm talking in a research mode, okay? You could, if you found it interesting you were, you'd just go and do it. And there was very little guidance. In fact, with my people, you know, if we're in estuarine ecology, if we had a problem, here's the general problem. Work on it. Want to talk about it? Let's talk about it. And, but, I think today it's much more restricted of what you can do and what you can't do. And how you can move funds around; you can't move funds around today like you could in the past, so I think today's environment, and I'm not an expert on today's, I think it's very restrictive and you're in a slot and you can't get out of that slot.

SM: What does that do for science?

EK: It's terrible. It's terrible for science. You have to have freedom to inquire. And you may be going down the wrong path; it's okay because maybe the next one you take is the one that you want. And what happens in science is, let's say I find out something here and everybody follows it this way but nobody goes up to the next level. And what

I'm always interested in going up to the next level. I think, and what I always tried to do, so I wanted to know what the next problem was four or five years out. And that way you, you're able to go ahead to tap into the funds that you're going to need to do. As an example, the turtle was an example. That's why I got into turtles, because I knew that was going to be a problem. And it did. And before I left, I wanted to get into looking at the ecology of snappers and, and I don't think they've ever addressed that. Because they really should have, there's, there was some interesting work going on with juvenile snappers and everything else, but you have to have that freedom to make the inquiry and spend money and do some effort in that. If you don't, you're stagnant.

SM: Why do you think this change happened? What do you think there's so much around...

EK: Restriction of money, and I think the government is restrictive in what it does. Again, I hate to tell you, but I haven't really followed what's going on in the federal government, Southeast Fisheries Center. I, I was down at the Southeast Fisheries Center four or five months ago because it was the fiftieth anniversary. To be frank, I didn't even know who the Center Director was. It's changed. And who the Deputy Center Director was. The only guy I knew there was Bill Richards, you know? And we're, probably, we're old farts, you know? And, but, you know, when we, we would have Center Manager meetings and we'd hash out things of what we wanted to do. I don't know how they operate today. I really and truly don't. I think you have to have fun being a scientist and if it ceases to be fun, get another job. Because you're not going to make a hell of a lot of money doing it, that's for sure.

SM: What, tell me a little bit more about the work atmosphere during the time that you worked. Like, when was it most fun for you?

EK: Well, I think, probably the most fun was when I was doing gear research because that was really wide open. When I came back from Utah State with my doctorate, Harvey was the Center, uh, Lab Director, and he said, "why don't you go out to sea for sixty, sixty days or so, just go on out. Take the boat." And so we did. We went out to sea, and I'm going to tell you a funny story. We were off of Pensacola, anchored in the afternoon; this is the *George M. Bowers* which is a seventy-five foot vessel, and we had an underwater TV camera on a sled and we had it over. And we were laying in the bunk after lunch just taking a, it easy. And I'm looking at the TV camera and I see all these fish swimming around there. I said, "what in the world is that?" And there was a school of fish swimming around. So we dove down. We could dive, you know, we dove, we did everything. We dove down and sure enough. So Don Wickham and I talked about this, and I said, you know what, or one of us said "you know what, that's a structure. They're augmenting on the structure." So out of that we set up a series of experiments to put out structures to see if we could attract fish. We called them pup tents. We published three or four papers on this, in *Transaction American Fisheries Society*. And it worked like a charm. So we, we looked at the behavior, we studied the behavior, we figured what we could do with it ourselves. That was fun.

SM: So what was the structure made of, like, material...

EK: Well, all we did was we made pup tents, you know what a pup tent is? We made that. Well, the first thing is we made them black, and that was the dumbest thing we could've ever done. Because we made them white so they could be seen. And the structure, fish orient around a structure because it's an unstructured environment, okay? And so they, and what happens through all of this stuff we found out that around the oil platforms, the fish are around these things in the daytime and at night they disperse and they come back in. And so there's a whole thing that's going on and those are the things that are fun to look at and do. You can't do them overnight, obviously it takes months and months and years, but those are the type of things that I don't think we're doing any of that anymore because nobody has free vessel time, or the free time to do it.

SM: Fascinating. So it's sort of like a curiosity that...

EK: Yeah. That's right. And it leads on...

SM: Exploring unbounded, sort of.

EK: That's right, exactly. That's why, that's why science was so much fun. Rather than doing it in a strict regiment on that.

SM: Is there any value to this strict regimen, you think?

EK: Oh sure, obviously. You've got to, you've got to please the people, you've got to please management. We have responsibilities for managing the resources. You talk about difficult things when good science, and don't ask me to define good science, I don't know what the hell it is, but if you have good science and you make a recommendation and then it gets torqued politically, that's really disheartening. I will tell you another funny story. I used to have, make presentations to the Gulf of Mexico Fishery Management Council on Tortugas, on Texas Closure, on turtles, whatever it may have been. And I was giving a talk. What I always did is I put everything into a, a sort of a publication and then I wrote a summary. The publication might be thirty pages, twenty pages, the summary was three or four pages. And I was at this meeting and this guy, Dayton Graham, who owned a shrimp processing plant in Bayou La Batre, came up to me and said, "Ed, you know, I believe everything you say. You're so right on." And I said, "Dayton, you're full of baloney. You don't believe what I say on Texas Closure." "Oh, that's different, I've got money over there!" It's betting on who's gore is being gored. Who's ox is being gored, okay? Very true, very true. And so you may have a friend on one issue, but not on another issue. And that's what the, management, when you get into management, that's when it becomes very, very difficult. Very difficult. So all you can do is be as straight and as honest as you can with your data. Everybody thinks you're talking the data against them, but that's not the way we work, or we should not work.

SM: What about the work atmosphere, relationship, with your colleagues within the Galveston lab?

EK: Well, I had many, many friends at the lab. I always liked to keep a very friendly atmosphere and, you know, my door is always open. A lot of times I had people over, I'd

go to their houses, we played bridge, we, we used to go and taste wine and people would bring, everybody would bring a bottle of wine and put it in a bag, and then we'd test which one we liked the best, and invariably I always tested, I always liked the one that had the corkscrew, ripple type. So we were not good wine testers, I can tell you that much. No, it was a very friendly, I think it was a very friendly atmosphere. And I think that's important. I think...

SM: And you had relationships, you mentioned, out of, outside of the work.

EK: Oh yeah, absolutely. Absolutely. Absolutely. And that's easy when you live in a small community. Now like in Miami, I think, that's very difficult because people they live all over so it's not that easy to visit if you live in Broward and somebody lives in South Miami, you know, it's not that easy to do.

SM: No. What, what changes do you foresee in fishery science, in the future?

EK: Well, I think the technology is going to continually to improve, and it depends politically what is allowed, which, for data gathering, because we do need data real-time at-sea data. And whether that will be allowed, I don't know. But the technology probably is there to put things on vessels to record just about everything. And once you have that kind of data then you can, then you can really look at stock assessment on a different level. Because we're guessing a lot of what's going on. So that, that would be a very big change. And whether you're doing just straight marine biology, and I'm using this term in the sense that you know you can do so much more with the technology as well.

SM: I see. What do you think is the, what is different, or what is the same, about the Southeast region and working in the Southeast region, Galveston, compared to other regions, like the Northeast or California?

EK: I don't know if I can answer that. I, I never worked in any of the other regions. I know the scientists from there, but that's about all I know, you know. And I think each lab is different depending on the personnel of the Lab Director and the people there.

SM: Is there anything you want to, you want to tell me about your work history that we didn't talk about, and you think it's important?

EK: Well, I think I told you most, most of the interesting things. I can tell you just like any other scientist, I sat in whatever cubicle I had and looked over data and grind it out, grind it out, grind it out, but that, some science is very boring. And we have to accept that. But in order to get the data to analyze, you've got to be able to collect. I think as a scientist one, you need to be able to define the problem. You need to then develop the design for that problem. You need to be able to collect the data for that design. You need to analyze the data, and finally you must be able to write it up in a, for peer review. That's critical. If you don't do those things, you're not a scientist. Now, I think part of the problem today with the pop-dy thing, they don't do the latter. And they don't write it up for peer review; they hand it off to somebody and here it is.

SM: Why do you think...

EK: Well, I mean, the publications, do you see publications on stock assessment of blue fin tuna?

SM: Well, I'm not...

EK: I know, I know, I'm just saying. So I think, by and large, there's less publication of meaningful information.

SM: Why do you think that?

EK: Because they just don't do it, they don't write it up. They don't put it out. I could be wrong, but that's my impression. I tell you who you need to interview, is Mike Parrack.

SM: Mike Parrack. What does he do?

EK: He's retired. Very obnoxious person, very good friend of mine. He lives in the Keys.

SM: Okay.

EK: P-a-r-r-a-c-k. I have his phone number if you ever want it.

SM: Off the record, I will ask for it.

EK: Okay.

SM: But I want to ask you, before we end the interview also, you already mentioned some of, some of the moments that were very important for you as a scientist, but I want to ask you again, about, to talk about one of your, the projects or things that you feel most proud, or you feel that you contributed the most in your career to the fishery science or management or both.

EK: Um, I think, from the standpoint of a management thing, what I put together for NOAA on the assessment of the stocks for the five regions, before we got into the extended jurisdiction, and convincing NOAA that this was worthwhile. You have to remember, at that time, the State Department was completely against extended jurisdiction.

SM: Why? I didn't know that.

EK: Oh yeah. We had three miles--

SM: Right.

EK: --into seas. They were against this because the Navy did not want to have this control, but they misunderstood. And it was a, it was a very large political thing that was going on. So NOAA was really against this, but had to be very careful how they dealt with this issue. And that was dealt with by Bob White at that level. Anyway, I felt proud

about being able to put this together from the standpoint that, here's the economics of it, what we could gain from it, okay? I also was very, very happy to be able to develop the Galveston lab to a high level scientific group of scientists, okay? And, you know, a lot of the things I did there; head starting turtle stuff, and making presentations to the Council on management issues, and that's basically it. I had a great career. I enjoyed it.

SM: It sounds like it.

EK: Yeah. Well you have to, otherwise, you know, do something else.

SM: Right. Can you tell me a little bit about the relationship between the Galveston lab and the Council, right? Or the Councils.

EK: Yeah.

SM: How, how was that managed, or, what were some of the issues, what were some of the good things...

EK: Well, the Council goes to the Center for specific information, whether it be mackerel, swordfish, shrimp, and there are people designated throughout the Center for these types of things. I, that's the way it used to be. It may be they just have one spokesman now, I don't know. But at that time, when I was there, they always had a scientist that presented that to the Council. The Council had their own scientific committee and they had their special committees, and then the group. So our relationship was basically along those lines. And at the same time, we had a thing that was called MEXUS Gulf, which was a cooperation between Mexico and the United States for research in the Gulf of Mexico. We did cooperative work with Mexico during the '80s, whether it be on shrimp, mackerel, a number of items, turtles certainly, okay? And so we, we, that was a very important aspect, and I don't know if they're still doing it, but MEXUS Gulf was a big thing in terms of our inter-relationship with Mexico. We actually tagged shrimp in Mexico. We actually ran a reward system for return of tagged shrimp in Mexico, paying U.S. dollars. Now that was a trick to get that one through.

SM: How did you manage?

EK: Well first of all, you're not allowed to have a lottery. So I didn't call it a lottery, I called it a reward system. What we did, is in the United States every month we would have a drawing for $500, $300, and $100 dollars for three tagged shrimp. And then we'd give the money out to them. And we did the same in Mexico, although the amount was less. Of course, nobody came after me; they probably could because it was strictly illegal. But we didn't hand the money out from ourselves, we went through Texas A&M. We set up a subsidiary to do that.

SM: Fascinating.

EK: You just have to know how to use the rules that are available to you without breaking. I forgot about the MEXUS Gulf thing, yeah. Yeah that was, that was a fun thing.

But we did, we did a lot of work with Mexico, we really did. And that was important. And I do hope that continues, but I don't know.

SM: You mentioned that you were very proud of the, that you were able to show the economic benefits, can you talk a little bit about that? What were the economic benefits you presented?

EK: Well, all we did is we took scientists from each Center and they did a stock assessment, in the Northeast, you know, haddock, cod, whatever, flounder. And how much was being taken by the foreign fishermen, how much we were taking. If we excluded the foreign fishermen, what would happen to the stock. Most of the stocks at that time were overfished, okay, so we could back off. If we had theoretically good management, you could gain this amount of poundage, given it's this X price, you know, it was very simple type of thing. The mathematics of the stock assessment was not, but the rest of it was.

[short break]

EK: Yeah so we did that, and so we could, we laid the whole scenario out for them and based on the best science we had. And during this period of time I also worked as a consultant for FAO and the United Nations.

SM: What's FAO?

EK: Food and Agriculture Organization out of Rome. And I also worked at, one or two times, for USAID [United States Agency for International Development], going to Oman and helping them set up their marine science programs.

SM: Fascinating. One more question.

EK: Sure.

SM: What, okay, it's related to the gender/racial component of working for the Galveston lab. Was there uh, one such component, what was the benefit, how many female scientists or, um, different ethnicities...

EK: Very, very few. We, you have, you have to understand at that time there were very, very few women in graduate school. As there were very few minorities in graduate schools. And at one time, I went on a trip with another individual to minority schools in Louisiana, Kentucky, Tennessee to try to recruit minorities. It was sort of useless because there was nobody there. It was like talking to an empty room. And we had at Galveston, we had, I think, two, you know, we had two, three, three scientists that were female, okay? And that was it, that was it. Now, nobody went out and was specifically recruiting female scientists, nor did we go specifically to look for male scientists. We just put the job advertisements out and we took whatever came in. So we were receptive but not, uh, active. And that was both for minorities and females.

SM: Did that change by the time you retired in 19...

EK: No.

SM:... in the '90s?

EK: No.

SM: No.

EK: No. Not at all. But now it has. Now it has, it's changed dramatically. One of the first, I see, is Nancy Thompson, who then became the Center Director in Woods Hole. And she was a turtle biologist. And, you know, she was good. I don't know, she is retired?

SM: Yeah. As far as I know.

EK: She lives in Hollywood, or Ft. Lauderdale?

SM: Close, yeah. I believe.

EK: If you talk to her, or you could give me her phone number, I would like to talk to her.

SM: I have her email.

EK: I would love to have that, if you don't mind. Uh, yeah, really. No, because times have changed dramatically. The Center Director in Miami is a lady, and there are many ladies in, I don't even know, I don't know who the lab directors are throughout the region anymore. I know the one in Galveston, that's about it. But I don't know anybody else. And of course, many of the names I wouldn't know.

SM: Once you retired, have you kept in touch with the, with the fisheries science; have you done any more work?

EK: No, not really. I did a little bit of consulting in, you know you get to consult for about six months and then nobody wants you. So that's that. No, I trade...

SM: Is there anything...

EK: ... options. I'm a stock trader now.

SM: Oh, I see. That's different.

EK: Yeah, it is. It was a new learning experience, but it was a good learning experience.

SM: Great. Is there anything you would like to add?

EK: No, I think we've...

SM: Anything we didn't touch on?

EK: Oh I, I, probably, but my mind is...

SM: If you remember, let me know.

EK: I will.

SM: I will stop here. Thank you so much.

EK: Thank you for coming.