NOAA Beaufort Lab Oral Histories Jeff Govoni Oral History

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Joseph Smith: Joe Smith here with the NOAA's Beaufort Lab. It's Monday, June 26th, 2023. We're here to interview Dr. Jeff Govoni, a former staff member of the lab. With me is Dr. Don Hoss and Dr. Ford Cross, former directors of the lab, and Dr. Doug Vaughan. We'll start the questioning with Don.

Don Hoss: Well, you know the drill by now since you're on the committee. But we like to know where people came from and how they got to Beaufort. So, let's start with that.

Jeff Govoni: Okay. My first sentence is my association with the Beaufort Lab began in 1975. My association with the Beaufort Laboratory continues to this moment. I'm happy to say, although I officially retired in early January 2011. I was born in Wareham, Massachusetts, which is the first town off of Cape Cod, in 1948. I grew up in the village of Buzzards Bay, which is also on the mainland side of Cape Cod which is now separated. The peninsula is now separated from the Cape Cod canal. But Buzzards Bay remains in the town of Bourne and remains in Barnstable County and is considered part of Cape Cod. I grew up with a fallow farm across the road from where my house was. On the other side of that fallow farm was an embayment called Buttermilk Bay, which is maybe the ultimate end of the body of water, Buzzards Bay. I spent my early days as a youth either on or in Buttermilk Bay, and in the process developed early on an interest. Infantile fascination is the best term that I can come for the plants and animals that lived in Buttermilk Bay. I went on. This fascination endured. I went through Bourne High School, which is the first main town in Barnstable County, up the road from Woods Hole, Massachusetts. The only thing I really excelled in in high school was biology and advanced biology as a senior. The problem was my behavior in high school was not entirely commensurate with the pursuit of biology as a profession, but that's what I decided to do. I graduated from Bourne High School in 1966, went on to Saint Anselm College in Manchester, New Hampshire, and majored in Biology. Ended up graduating, taking a Bachelor of Arts degree in biology from Saint Anselm's in 1970. I was then drafted, in fact, drafted my senior year at Saint Anselm's. Got a notice for my physical. That was the first year of the lottery. It was the only lottery I've ever won. [laughter] But I got a notice of my physical and was scrambling around trying to figure out what to do about this and ended up joining the Massachusetts National Guard right after graduation from Saint Anselm College in 1970. I served in the Massachusetts National Guard and subsequently the Virginia National Guard, where I ended up in graduate school. So, 1971 was a bit of a loss because I went to Fort Polk, Louisiana for basic training and then Fort Sam Houston, Texas, for advanced individual training as a combat medic. I was clearly destined for Vietnam, but the National Guard unit that I managed to get in had been activated and sent to Vietnam and was back from a year active duty in Vietnam. They had holes to fill. So, I was able to get in at any rate. When I got all that done, I went over to what was then Southeastern Massachusetts University, which is in North Dartmouth, Massachusetts, and started a master's program in biology. I took an M.S. in biology in 1973. During that time, I worked for a consulting firm. They were based in Woods Hole and subsequently in Falmouth. But at the time I was there, they were based in Woods Hole and working on a project that looked at the distribution of fish eggs and larvae in Narragansett Bay. This was relative to the proposed siting of a nuclear power plant at Charleston. Well, it was originally scheduled to be dug at the old Naval Air Station at Rome Point, Rhode Island. Given the results of the survey that we did in Narragansett Bay, they nixed Rome Point and they were going to site it at Ninigret Pond in Charlestown, Rhode Island. So, I worked over there for a

while looking at fish eggs and larvae in Ninigret Pond, Rhode Island. In any case, in 1974, I was accepted into the Virginia Institute of Marine Science, College of William & Mary. My wife and I moved down to Virginia where I entered the Virginia Institute of Marine Science in [19]74 in pursuit of a PhD. I was awarded a PhD in 1980 but had essentially finished up in [19]79. I defended in the spring of 1980. As a child, I had three aspirations. One was to become a biologist, one was to work in the marine environment, and the third one was to go to sea. Now, Massachusetts Maritime Academy, which is an accredited maritime academy, it's in Buzzards Bay, and the village I grew up in. I grew up listening to and watching ships coming through the Cape Cod Canal, listening to the Foghorns, which were blowing constantly because Cape Cod in the summertime is a very foggy place. Right, Doug [laughter]?

DH: Yes.

JG: All of these aspirations, I would say at this point were accomplished or realized at the Beaufort Laboratory. Because I was very fortunate to have begun my professional career really, besides, for those two years working for the consulting firm at the Beaufort Laboratory. My first trip to the Beaufort Laboratory was in 1975. I think it might have been [19]76. I was a graduate student at VIMS. I was looking for a dissertation project. I had done at VIMS. I had taken a course in the use of radiotracers in biological research. This course required a project which you had to do. I decided to use radiotracers to look at the possible role of dissolved organic material in larval fish nutrition and did that for a project for that course. But then it was time to hone in on a dissertation project. I decided to look at the digestive physiology of larval fish, which at the time, there was a question about the critical period and larval fish starvation, and whether larval fish was starving to death in the laboratory before they reached metamorphosis. I decided to attack that problem. My major professor at the time suggested that I come down to Beaufort because of the history of the Beaufort Laboratory and radionuclides because of the old radio ecology lab and the people that were still there. So, I came down and I visited and was hosted by Dave Peters. Dave Peters picked it up and said, "Yes. I can sponsor that kind of work here."

DH: Excuse me, Jeff. But who was your major professor?

JG: It was John Marra.

DH: That's right. Yes.

JG: At VIMS. So, Dave Peters picked me up as a sponsor and set me up. Well, the next issue was finding a white rat. In other words, an experimental animal, a fish, larval fish to experiment with. At that time, again, I was very fortunate because Don Hoss was trying to develop a larval fish spawning and rearing program at the Beaufort Laboratory. (Bill Hatlo?) had been assigned to pulling off the spawning, which began with induced spawning with hormones. At any rate, Bill was spawning menhaden and spot in the laboratory. Alan Powell was charged with the responsibility of rearing the larvae up, getting them through first feeding and nurturing them on up. So, I chose spot as the fish that I was going to work with because of the availability of spot larvae at the Beaufort Laboratory, which I could apply my radiotracer design to look at assimilation efficiency. Also, it was a supply of developmental stages that I could use to look histologically at the development and the capabilities that just have capabilities of spot. So, that

was my dissertation. I was very fortunate to be able to do that at the Beaufort Laboratory. Things evolved and five years later, I had a – this is [19]75, [19]76. I think it was [19]75 when I first visited the Beaufort Laboratory and talked with Dave Peters, who ended up on my dissertation committee, by the way. Five years later, I was finishing that up. As an impetus, I had a pregnant wife. So, it was time to – I'll keep this clean, Joe. It was time to move on. So, I was going to use another phrase. Joe would have to edit that out. So, again, John Mariner said, "Well, I heard that Beaufort was coming into some reimbursable money to look at trace metals in the northern Gulf of Mexico. This was the GoMex project. So, you ought to go down. You might think about going down there and talking to people about that." So, I did. I came down. I talked with Dave Peters first who said, "Let me go talk to Bud [laughter]." So, Dave Peters got back to me and said, "Yes, I think something could be worked out, but it would be an IPA." I said, "That's fine." It's a foot in the door. Plus, it would be gainful employment. So, I took the IPA and my first day of work was February 16th, 1980. I came on and Bud Cross was directing that project. Don Hoss was doing the larval fish part of it. Don had begun by trying to look at after we figured out a sampling distribution and a sampling plan. The next question was to try to figure out what larval fish were eating in the northern Gulf of Mexico. Because the overall plan was, as I understood it at the time, was to look at the effects of trace metals discharge from the Mississippi River on the ecology of the northern Gulf of Mexico, and that included larval fish production. So, that's where I came in. So, I worked the [GoMex?] as it was referred to at the time, project, throughout the [19]80s. Then as things would have it with northern ship allocation, we were allocated the ship beyond that, beyond the [19]80s into the early [19]90s. So, I continued to work in the northern Gulf of Mexico, now looking at the distribution of larval fish relative to the Mississippi River plume front, where I had found what I considered to be aggregations of both menhaden and spot in the Mississippi plume front in the wintertime when it's their spawning was. The Gulf of Mexico's work wound down in the early [19]90s. Don Hoss said, "I'd like you to start turning your attention to up here off of Beaufort." Don had gotten that start early [19]78, [19]79 with what were called the John DeWolf cruises, which he was using the John DeWolf, which is a Japanese longliner that was purchased by Duke University Marine Lab. Don was taking it out doing these stations off Cape Lookout. They ran that program [19]78, [19]79, [19]80, [19]81. So, I started looking at those collections. I had started looking at those collections, but moving back from the Gulf of Mexico, my attention, I decided to look at those collections a little more closely. Alan Powell was doing the same thing at the time. But then it occurred to me that where the stations were was really subject to a lot of shoal effects because it was just south of Cape Lookout Shoals. The water piles up and it eddies there, and it does all kinds of things. So, I said, well, it might be interesting to create a new transect that starts at New River, sea buoy, and goes out, punches into the Gulf Stream, perpendicular to the coast, right smack down the middle of one Onslow Bay before these water masses hit Cape Lookout Shoals and start to swirl. So, I did that work. That worked through the [19]90s. Then I was detailed to Silver Spring. Bud was at Silver Spring then trying to look out for the welfare of Beaufort Laboratory. At any rate, I was detailed for Silver Spring for [19]88 to [19]89 and spent a year.

DH: [19]98 to [19]99.

JG: Yes. [19]98 to [19]91, excuse me. I got this in a narrative that I'll give you one more over. So, well, [19]98 to [19]99, and then came back. I got some money the first year I was back from

the Office of Ocean Exploration, which I had found out about when I was just sort of winding up the year that I was up in Silver Spring. They had money, and sometimes they had residual money. They were starting to move to send a lot of this money to submersible work. But I wrote a proposal to look at the release satellite track drifters in the Gulf Stream front in these eddies that spin off the Gulf Stream front in Onslow Bay. Track the drifters and then sample zooplankton and larval fishes in and above these drifters to look at dispersion and eddy diffusion and the oceanographic processes that affect zooplankton as well as larval fishes. Of course, my interest was in those zooplankton that serve as food for larval fishes in particular. Well, we got that money and I was able to pull that project off. After that project finished, I sort of moved progressively and tried to help with administration and management to an extent. So, I could do more and more and less and less research for the last basically twelve years of my career, which finished officially in the middle of January 1980. So, that's my story. I can tell you that one thing that I forgot to say is when I first got here in the [19]80s, man, I love the place. I was an IPA and I decided I wanted to stay. Ted Rice was the lab director then. It's my view and I stand corrected if this is not true. But Ted encouraged publication which was then not a uniform thing in the National Marine Fisheries Service, of which we were a part then. There were some labs that did it, like La Jolla. The Northeast Center, which I was familiar with, did not necessarily encourage publication in the primary literature. I mean, reports and that kind of thing sufficed. The southeast, because of Bill Richards, I mean, they supported publication, but it wasn't something that was really pushed. Ted Rice supported publication. He supported the library. His attitude was researchers have to have available to them the literature. The Beaufort Lab had a wonderful library up until the hurricane of [19]38, I guess, destroyed that original laboratory, but it had been rebuilt. I was fortunate enough through the years working most of the time under Don Hoss, I mean, there was assignments for sure, and research that you had to do. But as long as I could justify a project, if you will, with the mission of the Beaufort Laboratory, Don provided the leeway to do that and the support. So, I was very, very fortunate, really, on the Beaufort Laboratory. I was able to realize all my dreams as a youngster through the Beaufort Laboratory. I spent a fair amount of time at sea. Ended up a professional biologist, which I had always dreamt about. It was largely realized at and through the Beaufort Laboratory. I moved from the IPA onto a temporary position when the IPA ran out in four years and was in the temporary position for about nine months until I got a part-time permanent position. At the parttime permanent position during that time, I went over to Duke and was able to secure some lab space over there and work a little bit on a project that I did with a colleague back at Virginia Institute of Marine Science. Did that for a year while I was on temporary and then moved while I was on part-time permanent, and then finally was moved into full-time permanent.

DH: When did you become part-time permanent?

JG: I was nine months after the IPA as a temporary. So, the IPA ran out in the [19]84. It should have been in [19]95. Most of that year I spent as a temporary and then [19]96 I guess would have been—

DH: [19]86.

JG: [19]86 would've been full-time.

DH: [19]86. Okay.

JS: What was the project at Duke? I don't remember that

JG: John Only and I had cooked up this idea of looking at the distribution of larval fish in the Chesapeake Bay plume. Since I was part-time, I could work with him on that project. VIMS had a plane. We had the plane available to us and all they would – I never spent a lot of time on it. It was more time just directing that project from down here.

DH: But you had to feel you had to go to Duke to do it. Is that?

JG: Well, I wanted lab space over there.

DH: Didn't have it here.

JG: Well, it was NSF money. The NSF can't – it's National Science Foundation money. They can't give money to the federal government.

DH: That's true.

JG: They can give money to a private university and do. So, that's how that worked out.

DH: This is a real surprise, huh?

JS: Yes, I forgot. I still don't remember it [laughter]. No. That's okay. I'm glad to know about it. Is there any particular part you didn't mention? SABRE, you were active in that too.

JG: Yes, I forgot to mention SABRE.

JS: That's okay.

JG: Well, SABRE was the work in up here in Onslow.

JS: Yes, you mentioned.

JG: I forgot to mention SABRE in particular, but that's where I work.

JS: Is there any particular part of your career that you would consider the best part, the most fun?

JG: I can tell you what was the least part was the last twelve years when I was kind of edged into administration and management.

JS: We all face that.

JG: I can't say a best part because I enjoyed it all. Eighteen years, I enjoyed all of it. I

apologize, Don, for not mentioning SABRE. Of course, SABRE, that was a big project and that was your project and I worked it. But I also forgot to mention about the project we did with the Corps of Engineers blowing up larval fishes off the bridge platform. I forgot to mention that. I forgot to mention Jack Price was radiation safety officer back in the [19]70s when I was doing. He procured all the nuclides and disposed off all the radioactive waste.

DH: You and Peters aren't the two that spilled radioactivity all over the floor of the storage room [laughter]?

JG: That wasn't me. That was Dave Peters.

DH: It cost us twenty thousand to get that taken out into a radioactive dump. I mean, something about that.

JG: The disposal of radioactive waste was different back then in those days. I mean, the AEC, I mean, you could take it offshore and just dump it. I mean, Jack Price told me that's how he did it.

DH: Yes, I went out with him once. All they had to do was go to the sea buoy and just dump it. That's what we did for a long time a long time, many years. Well, long before I got here and after. I don't know when they stopped.

JG: Well, when I was doing that radioactive work, I was using carbon-14, which has a long half-life, unless you adjust it, you're not going to be in big trouble. But I also did some work with chromium. It has a very short half-life, but that was a gamma X-ray emitter. So, things were different back in the [19]70s. So, Jack's the one that got the chromium.

JS: Doug, you had any questions?

DH: No, I don't think so.

JS: Two questions, Jeff. You and I have talked about this before, but relative to menhaden, you are one of the few people that have, I won't say, stumbled, but \come across a recent spawning aggregation of menhaden in Narragansett Bay, or at least you found evidence of spawning in Narragansett Bay. When you worked for the consultant, you told me you came across a really dense patch of [inaudible].

JG: 170 stations were sampled weekly. This was all funded by New England Power, who wanted to cite this nuclear plant at (Rome Point?). We had 170 stations in Narragansett Bay sampled weekly from the spring through to the end of summer, which is the real big pulse of larval fish spawning up in New England. Fewer number of fishes spawn in the fall and virtually none in the dead of winter. But we were in Narragansett Bay one time, and this was – Doug, this was not Mount Hope Bay, it was—

DH: Sakonnet?

JG: It was in the Sakonnet River. Exactly. The pogy boats were in there operating, Joe. There were two or three of them all around us, and we're in there with plankton nets. I mean, pogy boats were in there and they were nailing them. We could see them a purse seiners. We dragged the net through there. That net came up gelid with menhaden. I mean, it was just clogged, which was pretty good evidence to me that menhaden was spawning. This is lower Narragansett Bay and fairly high salinity. Narragansett Bay can get almost brackish up in Mount Hope Bay and up in the Providence River. But I mean, that was evidence to me that they were spawning up there.

DH: Well, you're stirring my memory because I worked on a menhaden project, and when I went up to GSO in [19]73 and I started, I think in [19]75 on the project I was paid for out of New England Power. But that was in Millstone Point, Connecticut.

JG: Yes. No, I never worked.

DH: Partly, that was based on a big menhaden spawn in [19]73 in Millstone Point.

JG: That's believable because what I surmise from all of that is menhaden spawn near sure in the northern reaches of their spawning distribution. As you go progressively south, they tend to move a little bit offshore and further offshore. For example, I think they spawn in the mouth of Delaware Bay because you catch fish eggs there. They don't spawn in Narragansett and Chesapeake Bay. I don't think, Joe, but they do spawn off of Chesapeake Bay. So, as you move further south, spawning progresses more and more offshore. Then Joe Smith tells me that that they catch Miami shad off of Cape Lookout. So, from all of this, I think as the population moves southward in the wintertime, after some spawning in the northern reaches of the spawning population, they come around Cape Lookout, and the bulk of menhaden spawning is in the offings of Onslow Bay. Not in the Gulf Stream, but out, close to the Gulf Stream. That's what I surmised all that. That's true for spot, too, I think. The bulk of spot spawning is south of Cape Hatteras. There is some spawning up in the Mid-Atlantic Bight for spot.

JS: Got another menhaden-related story.

DH: Well, the Millstone Point project supported me on working on menhaden my last two years at Graduate School of Oceanography.

JG: This was all sailor-held.

DH: I was there at GSO from [19]73 to [19]77. So, I was supported from [19]75 to [19]77 with Saul. Then I went to Oak Ridge. The first thing they did was send me on an alternate site visit for Charleston. So, I had a trip, flew into Montpelier, visited Umbagog Lake between New Hampshire and Maine, and came down to western Massachusetts. On the last day we ended up touring Rome Point.

JG: Oh, really? Yes.

DH: As alternate sites for the Charleston. But then the Indians had their way because they got

the land at Charleston.

JG: The Narragansett tribe.

DH: Yes. Exactly. Joe, you had a question?

JS: Yes, it was just another menhaden-related story. Again, Jeff and I have talked about this in the past, but in your GoMex project, you were looking at the Mississippi River plume front. To really accentuate what was going on at the plume front, you took some of our old scale reading cards, paper cards that were —

JG: Punch cards, computer punch cards.

JS: The punch cards. We had gotten more advanced than they were obsolete. You took those and you scattered them perpendicular to the front. Then you could see the movement of the water masses. Anyway. I'll stop.

JG: I thought there was frontal convergence and the frontal convergence accounted for the large aggregations of larval fishes that you found there. So, we didn't have a plane. I think Don was on that cruise. I mean, punch cards, they were going to be discarded. So, it wasn't taking data or something. I mean, the punch cards had been transcribed. So, they were going to be thrown out. So, anyway, we took them out to sea with us. I think four boxes of computer punch cards bisected the plume. You could see the plume front because it's muddy water here and its Gulf of Mexico's central water there. I mean, within a yard, you could see the plume. But by bisecting the plume and then watching the cards move towards the plume and pile up in the plume, that sort of nailed down the frontal convergence thing. I actually timed it, but to get that kind of stuff published, you would have to have drifters [laughter].

JS: Of course, Jeff, we did that paper together where we followed up on your earlier paper on the golf paper. Well, you had done the first paper where you noted the relationship.

JG: I noted a correlation.

JS: Correlation, yes, with Gulf menhaden and the river flow.

DH: I wondered if he got a permit to do that.

JG: Well, it was all biodegradable. So, they all washed up on the beach of Texas, you know what I mean?

DH: Everything else is on the wide ocean.

JG: Right. [laughter]

DH: GoMex was certainly one of my favorite. I finally got out to sea, and I was just happy as a lark. But were you on the cruise where we lost the [mochnacz?]?

JG: Yes.

DH: Yes, we were on the –

JG: That's [19]79, I think.

DH: Very expensive piece of equipment.

JG: Actually, it wasn't on that cruise. I was not on that cruise.

DH: You weren't?

JG: No, I was on a cruise in [19]80 and [19]81, but I heard the stories. I heard the story of (Shayler Cummings?) coming in and finding you.

DH: I was having breakfast.

JG: Yes. I said, "Hey, Don. We lost the package." [laughter]

DH: I said, "Well, so what you lost a package?"

JG: [laughter]

DH: He spoke the jargon, I didn't. But two months later, they hit me with what we'd really lost.

JG: It struck a wellhead, right?

DH: Yes. We probably caught an old, capped wellhead down there. That was not good news because for us, that was a huge expenditure for that.

JG: Well, yes, that was a lot of money. So, that was [19]79. I wasn't on that cruise, but I heard all about it and we had reacquired.

DH: You made most of them.

JG: Yes. Well, I made it from [19]80 on, but [19]78, [19]79, which was the first to GoMex cruises. I wasn't on that. But we started the net near bottom, which when we were up on the shelf, we had to bounce it up and down. Because the idea was to filter if you would actually strain a certain volume of water and you couldn't accomplish it in shallow water or on a single oblique toe. But when you're off the edge of the shelf, which is right at the Mississippi mouth, the shelf is very narrow. It expands out when you get east of the Mississippi Delta. It expands. Then west of the Mississippi Delta, it expands some. But right off the Mississippi River, it's fairly narrow.

DH: I was impressed.

JG: So, apparently, we would start at near bottom, which when you're off the edge of the shelf, you're down there. It was 200 meters. Must have struck a wellhead, I guess. Now they have maps of all those cap wells.

DH: Well, it was like working in a small city because of all the platforms.

JG: You go out there at night and it looked like a city with all the flares and everything. We had a transect off of Cape San Blas, Florida, that was the eastern transect, and one off of Galveston, and one off the Mississippi Delta. You get over in the Eastern Gulf, eastern northern Gulf, and the ship traffic coming out of mobile but not as many platforms. But right off of the delta and the flares, watching these flares at night coming out of the tops of those things.

DH: I remember we got in a fog one night in that area, and (Sibley?) was captain on that one.

JG: He never made captain. He was aways first mate.

DH: Well, but he was running the ship at that time. (Gunner?) I think had just run into the train and Pascagoula, but –

JG: I think he parked his truck on the tracks and he was –

DH: It did the truck in. I know that.

JG: The train ran it over.

DH: Oh, he parked his truck on the main line of the L&N. Not a good idea.

JS: That was a big old captain. Yes, I heard about him.

DH: He was a huge guy. A beer can would hide in his hand.

JS: He was a big a guy.

JS: Anyway, we digress.

JG: He squeezes it and then plumes in his mouth. [laughter]

DH: I have a question. What did you do after you retired both professionally and unprofessionally? I won't get into all the unprofessional.

JG: Well, I sat around and watched reruns of Gilligan's Island [laughter].

DH: You worked for the same outfit that I did for a little while

JG: Well, I got an adjunct professorship with NC State and worked for that for a while. I got

that adjunct professorship when James Morris came on board here and got to work with lionfish. I supported his research at the Beaufort Laboratory. Jim Rice, who was at NC State and who also worked on the SABRE project jumped in, James through the academic hoops at State. I directed his research. Then I carried that adjunct professorship in their retirement. Besides watching reruns of Gilligan's Island – I mean, that was marine – I had some old data sitting on the shelf. So, I blew the dust off that data and looked at it and tried to make some sense of it out of it and then published a few papers. One of the nice things about the adjunct professorship at NC State is you have access to the state library. Back when I was working, I had published one paper that was the result of the blasting contract that we had with the Corps of Engineers. That was for building the new bridge when we built the new bridge on the Pirates Island. At any rate, I had published one paper in Journal of Aquatic Animal Health, which is published by AFS. But that's largely NC State Vet School, which is now fourth in the country, was established around 1980, but they've worked all the way up to being the fourth in the country. Anyway, I published in the Journal of Aquatic Animal Health, and that then qualified for access to the vet library at NC State. Not just life sciences, but the vet school. So, the veterinary library, which is all fortunate because if you're trying to publish ancient data and you've lost track of the literature, you've got to get your act together with all of that before you try to publish something. It was very helpful. So, that's one of the main things I did. I also had this shot out of the blue after the Deepwater Horizon blowout in the Gulf of Mexico. I got called by a call from a legal firm.

DH: Now is the one you and I were doing some stuff for consulting for too, right?

JG: So, I did some consulting for that as well.

DH: We did the work with Dave Evans.

JG: I published some of Dave Evans's work because after I got back from the year in Silver Spring and as I say, I got that and national is it no ocean exploration money to do the drifter work. Don had me as a team lead, this resource coordination. So, Dave Evans and (Peter Crumley?) and Randy Ferguson and James Morris were assigned to that team. The rest of the research scientists ended up with (Pat Tester?). So, Dave Evans trying to keep him going and keep him active in research, we had done some work with looking at Mercury and done some experimental work out in the larval fish rearing facilities. After I retired, that work was never published. So, I started working on trying to get that work published. Of course, Dave died. So, it was published, finally got out posthumously for Dave. I ended up a senior author only because the man's dead. Someone's got to jump through. I mean, I had written a paper anyway.

DH: Well, my point is, you've maintained a pretty active research life since retirement.

JG: Well, I have. All good things must come to an end and it's grinding down. I didn't want to retire cold turkey and I didn't.

DH: That's good. What year did you retire?

JG: My last working day was New Year's Eve 2010. My official retirement date with OPM is I think January 15th.

JS: Third or fourth are the magical dates.

DH: Okay.

JS: Of 2011.

JG: 2011, right.

DH: Well, are there more questions?

JS: Thank you. Jeff, that was very good.

JG: Yes.

[end of transcript]