9-9-2016

Wigley, Roland ~ Oral History Interview

Joshua Wrigley

Follow this and additional works at:
https://www.st.nmfs.noaa.gov/humandimensions/voices-from-the-fisheries/index

---

Recommended Citation

Wigley, Roland. Interview by Joshua Wrigley. *Voices from the Science Centers*. Voices from the Fisheries, NMFS, NOAA. 9 September 2016.

This oral history was produced in 2016 as part of the *Voices from the Science Centers Oral History Initiative* conducted by *Voices from the Fisheries* with funding by the NMFS Office of Science and Technology.

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

Interview with Roland Wigley by Josh Wrigley
Summary Sheet and Transcript

Interviewee
Wigley, Roland

Interviewer
Wrigley, Joshua

Date
September 9, 2016

Place
Falmouth, Massachusetts

ID Number
VFF_WH_RW_001

Use Restrictions
This interview transcript is provided for individual research purposes only; for all other uses, including publication, reproduction and quotation beyond fair use, permission must be obtained in writing from: Voices from the Fisheries, NMFS, 15 Carlson Lane, Falmouth, MA 02540.

Biographical Note
Roland Wigley was born in 1923 in New Jersey. He studied at the University of Maine at Orono, where his college career was interrupted by World War II. He served in the Army Air Corps during the war. He returned to the University of Maine after the war and received his Ph.D. from Cornell University, where he did a dissertation on the life history of the sea lamprey of Cayuga Lake. He began working for the U.S. Bureau of Commercial Fisheries as student in 1949 and was hired in a permanent capacity in 1954. His first research project was the haddock food study. He participated in many surveys on the *Albatross III* and was Head of Benthic Investigation.

Scope and Content Note
Interview contains discussions of: U.S. Bureau of Commercial Fisheries, storms, Woods Hole Oceanographic Institute, Rachel Carson, *Albatross III*, fish tagging, sargassum, pycnogonids, Woods Hole League, relationship between Bureau of Commercial Fisheries, WHOI and MBL, haddock food study, benthic studies, *Marine Flora & Fauna of the Northeast United States*, the Woods Hole scientific community and the red crab survey.

Roland Wigley discusses the early days of the U.S. Bureau of Commercial Fisheries in 1949, a voyage with Rachael Carson, work with various professionals at the Bureau in 1954 and the remainder of his career. He shares the details of a near-fatal storm in 1955; WHOI history and

connections; innovations in research; includes many names in the field in Canada, U.S., and Aberdeen, Scotland.

NOTE: Transcript starts in mid-story. Details of interview are given at end.

Indexed Names

Ayers, John
Ballard, Robert
Barnard, J. Laurens
Bigelow, Henry B.
Bousfield, E. L.
Buller, Raymond
Carricker, Melbourne
Carson, Rachel
Colton, Jack
Drye, Frank
Edwards, Robert
Emery, K. O.
Gendron, Rodolphe
Graham,Herbert
Ike, Roberta
Lux, Fred
McCauley, Franklin
McIntyre, Alistair
Miles, Ernie
Plough, Harold H.
Raney, Ed
Robbins, Tim
Rodell, Marie
Royce, Bill
Sanders, Howard
Schroeder, William C.
Shearer, Frank
Shuck, Howard
Sked, Ogden
Smith, Keith
Smith, Ralph
Smith, Sidney
Theroux, Roger
Verrill, Dr. Addison
Webster,Dwight
Walsh, John (Jack)
Welch, Lee
Welch, John ("Red")
Zullo, Victor

Transcript:

RW: -- he crawled over to the telegraph and what he did, he speeded it up and that brought it [the vessel] up.

JW: And that righted the ship?

RW: [laughs] It hesitated for a while. But we were penned up. You couldn't get outside…a raging storm. The life boat was all we had back in those days and that blew off at about 60 or 70 miles an hour. There were little caps on the gyros. They all disappeared. But the main thing was that we had two big steel doors leading to the…what we called the lazarette. It was just a storage room about half the size of this room. That's where we had all our samples. [laughs] Big planks and everything in there. First of all, the doors were washed off. The waves washed everything out of that room. The only thing left was a little scum around where the bulkhead met the deck. We had sediment samples and some of the sediments were clay. And it was the clay that collected around there and then small fragments of glass.

JW: That was all that was left?

RW: That's all.

JW: Everything else was washed out?

RW: It was all clean. There had been big beams and big planks and all our samples.

JW: What do you think the wave height was during that storm?

RW: Oh, it was terrible. You know, the *Daytona* sank? That was just up behind us.

JW: Really? What ship was that?

RW: That was a cargo ship, 300 and some feet. It was full of gypsum heading from Nova Scotia to Philadelphia. Twenty-three people in the crew all died. Oh, that was a crime. But, I know they had the Texas Tower that was still [intact], it was a missile silo. You probably don't even remember it.

JW: What was that?

RW: It was a missile silo of radar. A big one. Three big legs and they got over 80 mile[per hour winds]. See, that was quite a ways from us. We had started down along the southwest margin of Georges Bank and we were working east and that's when the storm hit us. I took the weather[forecast]. There was weather for mariners or something like that. At 6:20 in the morning, 6:20 at night, and I wrote it all down and I kept all of those[records]. We used to also take a BT cast[at each station]. I don't know–

JW: What does that stand for?

RW: That's a bathythermograph. It was our high-tech equipment that would take the[water] temperature from the surface to the bottom. We thought it was great. We put a new smoked slide on it each time. Well, we had a log for that among which was the anemometer reading.[The anemometer blew away at 92 mph]. [laughs] So, when we came back, I had all these anemometer readings that we actually took and then I had all these forecasts that the weather people[gave out], they were so far off, it was sickening. [laughs] They never–

JW: Had they mis-predicted the path of the storm?

RW: Nobody knew about the storm[not even the Weather Bureau].

JW: Oh, at all?

RW: No.

JW: Why not?

RW: In fact, they sent a 110-foot tugboat from Provincetown to the Texas Tower.

JW: Where was the Texas Tower located?

RW: That was up on the Cultivator Shoals. That's the northwest corner[of Georges Bank]. Very shallow up there. That's why it was there. Well, this tug, the storm was so bad, they couldn't even get anywhere near there. You wouldn't believe this, I didn't believe it, there were 50 people stationed on that Texas Tower and there were 36 visitors. [laughs]

JW: During the storm?

RW: Well, they were there before the storm.

JW: I guess there was no way to exit there.

RW: They didn't have any more information than we had, as far as I knew, so they figured it was normal weather. Well, when the tug got about halfway there, they had to turn around and come back and said "there's no way we can get to the Texas Tower." They got winds up over 80 miles an hour and they had a 61-foot wave that they measured somehow. We heard that there were a number of fishing boats went down, but we didn't have the names or what kind of boats they were. Anyhow, it was a wicked storm and even our fisheries people didn't know. Here, our vessel was stripped and [laughs] we came limping in. I remember, of course, the power steering went out early and the captain had to pick two of the youngest people. The waves were coming from two directions and they had to steer manually. It was a big wheel[on the bridge]. Oh, they had a time. They were young people.

JW: How difficult was that to manage manually?

RW: It was tough. That's why they had to pick young guys.

JW: So, one on either side trying to wrestle the wheel?

RW: Oh no, they took turns, one at a time[an hour at a time for 10 or 15 hours]. [laughs] It took a lot of strength. Those young guys, they were both in very good shape. Two fishermen. Two of the youngest fishermen. Lee Welch and…who is the other fellow? I've forgotten his name.

JW: Who was captain of the ship on that voyage?

RW: That was Gendron. Captain Gendron. I wrote an article that the [Falmouth]Enterprise[Newspaper] published here in later years, four or five years ago. For some reason or other, they left off the names of the people that were out there. It was my first assignment as Chief Scientist. [laughs]

JW: Really? That's the way to get your start. [laughs]

RW: Well, I had been out on the *Albatross III* every cruise in 1949,I was assigned. Bill Royce was [the] Director. I applied for a summer job. I thought it'd be at the lab. He said, "Yes, but you will be assigned to the *Albatross*[*III*]. You have to make every cruise." So, there were two of us. Who was the other fellow? A fellow from Rhode Island. We had a wonderful time. We lived up in the residence with all the antiquated plumbing. [laughs] $2.12 a week for rent and we got clean sheets and pillowcase and towel. Oh, my God.

JW: Where was that located?

RW: Just right next to the old lab. See, the two labs…the lab was here, and the residence building was only about I'd say 150 feet away, right next to it.

JW: That building, I guess, was razed, right?

RW: That's right.

JW: It's now gone?

RW: The last part of it went in 1960, when they started to build the new lab.

JW: When you started on the *Albatross III* in 1949, had you recently been hired or were you still working on your Ph.D. at that time?

RW: No, I was a– Let's see...I was a student and I think I had a half-a-year. Anyhow, I thought Bill Royce, he and [Howard] Shuck – Shuck was a very good statistician – and Bill Royce – Bill Royce was, I think, ahead of his time because it was 1949 when Rachel Carson came aboard and we had a wonderful [trip at sea].

JW: And you met Rachel Carson?

RW: She was right there. She would come down to the wet lab. See, that was my home essentially, the wet lab and the bunk.

JW: Onboard the ship?

RW: Yes. I spent…well, it all depended upon the type of cruise, you see, whether it was a survey cruise or a biological cruise. Tagging. Shuck was tagging yellowtail flounder and they were frequently tagging haddock, if haddock came up in good shape. We had these pens on the deck and we'd put tarps in them, fill them with salt water, and dump the fish in there. If they swam around, we'd catch them, measure them, and put a tag on. Very often, Peterson-type tags.

JW: What did those look like?

RW: A Peterson? It was a double [circular plastic]disk with a pin in between. It had a number, a specific number, and it had Fish and Wildlife Service on the other. Red and white.

JW: How long would one of those tags usually last in a fish?

RW: [laughs] We never got very many returns. Let's say that they were not very good.

JW: Was there a certain part of the fish that you would aim for, for placing the tag?

RW: Most of the time, as I remember, we would put it up on the first dorsal, but I think they tried different places and back by the caudal fin. They put it back there but for some reason or other, it was either the condition of the fish or the weakness of the tag, something like that. We had a very varied crew.

Now, one thing that Rachel Carson saw was the waste. You know, when we took samples, they were using a one-and-a-half Iceland trawl. That son of a gun was absolutely huge. And we got– There were times when we had tons and tons of fish. Haddock and oh, God, smooth dogfish sharks. [laughs] Tons of them. Tons and tons spilling all over. Well, you see, it was an ordinary trawl for the fishermen, so when all of that came onboard, there were all kinds of great big *Ascidians*, crabs, *Alcyonarians*; all kinds of life.

JW: Are those mostly benthic organisms?

RW: Yes. Then, when Rachel Carson was there, they did a very nice thing. I think Ray Buller, he was a project manager. He didn't go, but I think he arranged it. We went to the southern edge of Georges Bank and we went over into the deep water and they made a trawl down in there. And it was fabulous. We got these leopard sharks, snipe eels, grenadiers, lantern fishes. Oh, it was a bonanza. Then, in addition, it was a double bonanza because we were dipping Sargassum[weed]. See, the strands of the Sargassum came that far up [north]. And we had big

enamel pans that we put in the wet lab. And when we would put this Sargassum in there, there would be Sargassum fishes, shrimp, crabs, and the thing I loved were the *Tardigrades*.[1]

JW: What were they?

RW: The *Tardigrades*. They're a little spider-like primitive organism. There were little bladders on the Sargassum weed and these little *Tardigrades* would fold themselves all around a bladder so nicely protected and camouflaged. So, Rachel Carson, she came in and I don't know whether she had seen it [Sargassum and its community of animal life] before or not, but she was very excited. [Usually]she was a very sort of solemn person. And I don't know whether…I have a hunch she wasn't feeling her best. She and her lady friend --

JW: Marie Rodell? Her editor.

RW: Yes. You've met her? Or you've heard?

JW: I read about her.

RW: That's good. Yes. Well, they were very nice. Anyhow, she got a tremendous kick out of the whole thing. But one thing, I think…the most impressive thing besides all this interesting fauna, was the waste. See? I'm not positive whether on that cruise we took the catch up to Boston and sold it. See, there were times during the summer [when] we did that. Whether this was one of those or not, I don't know, but we'd get, geez, like a ton of this small haddock. All [tossed]over the side. Of course, we had to measure the length frequency of a few thousand. [laughs] Where the statistics were, I don't know, but we could have used it then.

JW: How long would that take to take all those measurements?

RW: Well, it would depend upon how many. They would say whether to do a hundred of these and all of those, but it depended. But I would say anywhere between a half an hour and an hour. We used the aluminum punchboards. [laughs]

JW: Did Rachel Carson comment at all on the waste?

RW: I don't know if she did or not. We didn't have many weighty discussions. [laughs]But she couldn't help but be impressed. You know, it was very exciting because here there were all the noises from the winch and there [were] hundreds of seagulls and they were all screaming and flying in. Geez. Then there would be some shouts. See? We had a gantry in the stern and they had to shout to them to do hookup or whatever. So it was all very exciting with all these crabs crawling around, fish flapping. It was very exciting and I'm sure she got– But then to see all that[waste]. You know, some of those animals would take a hundred years to grow. And these trawls are killing them like nothing at all. Just a nuisance to them. Oh, God. I hope some of them survived…but anyhow…

[1]Narrator Correction: The organisms that Dr. Wigley was referring to here and in the following paragraphs are *Pycnogonids*.

JW: How much time did Rachel Carson and Marie Rodell spend on deck when you were out at sea?

RW: Very little. They would come and make [an] appearance. Well, I think sometimes they'd come to the bridge when I didn't see her or something like that. But I don't think they were feeling too good, so they didn't come out too much. They were very nice. She's the one I talked to most…was Rachel.

JW: That's incredible.

RW: Yes. One thing that she warned me about was the Portuguese Man-of-War. We had a few of those. I'd never seen one before. And she said, "Be careful[of] those things, if you get stung by one of those, you know it. Like a wasp's sting."

JW: I'm trying to think now, *Under the Sea Wind* must have come out in 1941, so then at this point maybe she was working on *The Sea Around Us*. I think that was 1951 when that came out.

RW: I think that was about right.

JW: Sometime around there.

RW: Yes. I actually should reread that to see if there was anything that I could relate to personally. [laughs]

JW: Yes, maybe she was taking notes and using the trip as a fact-finding expedition.

RW: I think she would. I think she probably[took notes], I didn't see her do that out on deck, but I wouldn't be surprised if when she got back to her bunk, she would record the notes, because it was exciting at times.

JW: When you were preparing to go to sea on that trip, when did you learn that she would be aboard?

RW: We didn't learn. [laughs] There was a paper write-up telling us who it was and how to behave. We didn't get that until several days after we returned, but we could see Ray Buller and the steward. They were carrying suitcases and there were these two women in tow. We saw them go aboard and I think we had heard that she might, or there might be a woman onboard. Well, you know, Ray…I'll tell you, Bill Royce was way ahead of his time. It was right about that time when Roberta Ike stowed away on the[Woods Hole Oceanographic Institution's]*Atlantis* and they were several days out when she was discovered. And George Clark from Harvard was the Chief Scientist. They turned around immediately and dumped her on the dock.

JW: Was she a scientist working for Fish and Wildlife?

RW: No, she was a student at I think it was Wellesley or one of those colleges up around Harvard. And…Oh, I think she was a hired for the summer working [at WHOI] on plankton. I'm

not absolutely positive, but that's what I thought. Then, she wanted to go out and see how they collected it and see the equipment and all that stuff. Well, here's Bill Royce, no problem. If a woman wanted to go aboard, she would go aboard. So, I give him high marks. Also, that same summer, we had a colored fellow, Ernie Miles. Ernie, geez he was a nice guy.

JW: Was he a student as well?

RW: No, no. He was a biologist, permanent-party biologist, and he would be assigned once in a while to go out. Of course, I was on all the cruises. That was my job. And…a little anecdote, if I can add it in. [laughs] Ernie and Jack Colton loved to play hearts. So there was Ernie, Colton, and Dryer and myself. We would have this knockdown drag-'em-out card heart games and we dreaded the next station because it would interrupt our card game. But we would work extra hard to get everything processed and cleaned up and washed and ready for the next one and get back to our game. They were that interesting.

JW: This was certainly the era before television?

RW: Yes.

JW: So, I guess of the things that you could do aboard ship to pass the time, that must have been [fun].

RW: Oh, that was great. God, those were terrific games.

JW: So was Ernie the first African American scientist then aboard the *Albatross III*?

RW: As far as I know, because it was fairly new. I mean, they had had it [the vessel] for a little while. I don't know the details of when he came, but I don't think he'd been there for too long. But he was a heck of a nice guy. Then, we used to have our softball teams. Ernie loved to play. He'd play as shortstop and even Royce and Shuck, they always wanted to be the pitchers.

JW: Was this the Woods Hole League?

RW: Yes. We would play the– There were two teams from the Oceanographic. One was a ship [*Atlantis*]and then I think there were two from the, let's see…there was an MBL [Marine Biological Laboratory]. Oh, the Coast Guard. The Coast Guard had two. The *Hornbeam* and the Base. We had some wonderful softball games.

JW: Where did you used to play then?

RW: We used to play over on Millfield. There's a ball park over on back of Millfield.

JW: Is that down in Woods Hole or up here in Falmouth?

RW: It's in Woods Hole back of that little Catholic church there. There's a little church and then a ball field. I thought it was a pretty good little ball field. We had some wonderful games

there, especially with the MBL, because there was a couple of young guys and they were giving us some lip and we gave it back. [laughs] We always enjoyed it.

JW: What were your research interests in the late 1940s when you arrived? I guess maybe I should start out by asking: did you…you arrived in 1949?

RW: Yes, [only for the summer though. I came back in 1954 for a permanent position.]

JW: Was that what I gathered before?

RW: Yes. The main thing people wanted to know was what do the haddock eat? See, there were no food studies of haddock other than a few observations. So I actually took some of those[haddock stomachs] back to school and I found I spent most of my time trying to identify all these interesting little invertebrates. So it was, actually, when I came back it was the same story. I finally published a report on the food habits of haddock, but I spent most of my time trying to identify invertebrates that were in the stomachs.

JW: How much had been published on those species to that point?

RW: Well, the one that we used was Bigelow and Schroeder.

JW: *Fishes of the Gulf of Maine*?

RW: Yes, that was the bible. He had a lot of good information, but it was very general.

JW: That came out in 1952…'53?

RW: Well, there was a predecessor. There was *The Fishes of the Chesapeake Bay*…[that] preceded that.

JW: Who wrote that one?

RW: Bigelow and Schroeder.[2]And I'm not sure whether that had…[inaudible] wasn't too pertinent, but it was a damn good book. So he was a godsend. He did the fishes, the plankton, and the oceanography, but he didn't do the benthos. The only basis we had were from Addison Verrill, both he and Sidney Smith from Yale were zoologists, first class zoologists. Every time a fisheries boat or a fisherman brought in a specimen, if it was new, they wrote it up and published it. Verrill published hundreds of new species. But that's all we had were these occasional records. That's what led after the '49 stint, when I graduated from Cornell, I took a job in [the] New Jersey Conservation Department. [laughs] I ended up doing paperwork and I hated it. Word came through the grapevine that there was going to be an opening in Woods Hole, so I came right up. That was Herb Graham[who] was in charge then. And so I came right up. I corresponded with Herb and he said come up. And I came right up [to Woods Hole].

[2] Narrator Correction: The volume to which Dr. Wigley was referring was Henry B. Bigelow and William W. Welsh's 1925 work, *Fishes of the Gulf of Maine*, Bureau of Fisheries Document, No. 965. This version was a precursor to the more well-known edition that was published in 1953.

JW: Do you remember what year that was?

RW: It must have been around, it was either ’53 or ’54, because I was hired in ’54. [laughs] I was so tickled to get out of that paperwork job and get back. Of course, I knew a lot of the guys.

JW: From having done the research cruises?

RW: ’49. I really had a good time. I’ll tell you something you might want to know about, the interaction between the fisheries and WHOI [Woods Hole Oceanographic Institute]. When I first came in ’49, I ate at the WHOI mess. They permitted me. Then, when they closed up, like part way through the summer, I was able to eat at the MBL mess. That was very interesting because you were assigned a seat. Miss Bell was at the entrance and Miss Bell was a very dignified and a very intelligent woman. She could remember everybody and where they sat. [laughs] She had some very interesting seating. When we went to the, I think it was just one meal a day. No, God, it must have been every meal. Yes, it must have been. I’m not too sure. It must have been breakfast and supper. Anyway, supper was the main one that I remember so clearly. [laughs]

JW: She remembered where everyone sat?

RW: Yes.

JW: And could direct people?

RW: Yes. We would line up out front and then she’d say okay, and she’d keep her eye on what was going on inside and what was outside. She did very well. We all loved Miss Bell.

JW: When you were doing your doctoral degree at Cornell, who were you studying with?

RW: Ed Raney and Dwight Webster. Ed Raney was the ichthyologist. Dwight Webster was the fishery biologist. John Ayers from WHOI was the oceanographer. So, we had a course in oceanography from John Ayers and those three people were on my committee. Raney was the chairman. He was very enthusiastic. He was a very enthusiastic guy. He’s the one that put me on to the fellowship from the Fish and Wildlife Service for two years. Geez, that was lovely. I had a teaching assistantship the first two years, but then the last two, I was on this Fish and Wildlife Service fellowship. That worked out really good. Ed Raney was very much with what was going on and taking care of his students.

JW: What was Raney’s specialty at that time?

RW: Well Raney was…it was mostly new species of darters and *Notropis*. We would have trips to the South—Georgia, Tennessee, Florida—with there would be four, maybe four grad students and Ed and we’d go South.

JW: Would you just drive?

RW: Just drive. We would take one of the old vans. Then there was as motor pool. We'd drive that van. We'd put our collecting gear in the back and we'd go down for three or four or five days; mostly about three or four days. Ed was so good. We would hit the headwaters and he could see where there was stream capture. The headwaters of one stream would get captured by another stream and you could tell by the fish composition in these headwater–

JW: Where they would merge?

RW: Yes. Yes, the waters must have merged. You know, maybe geologic time. I don't know how long a time. It was a long time where they would capture. The stream would be captured and flow into the other.

JW: Okay, were there distinct species of darters there that he was very interested in?

RW: Yes, that's right. Darters. We all had our own field notes, but Raney got the collection. He had a nice collection there at the school. That was his main interest. Of course, he spent a fair amount of time teaching.

JW: What did you wind up doing your dissertation on?

RW: On the lamprey. The sea lamprey of Cayuga Lake. I did the life history. Well, you see, first of all, the Fish and Wildlife Service, along with the Washington office, they thought Cayuga Lake, the lampreys were getting along, they were in balance with the fishes. No problem. They figured it was a pygmy species, sub-species, or dwarfs or something. It turned out that they were the same size as the Great Lakes, because I measured hundred if not thousands. But the most interesting thing, the reason that there was more or less of a balance, there was only one stream feeding the lake with lamprey larvae, with metamorphic specimens. I had a big net right across the stream. I captured everything that went up or down. Geez, it was kind of messy, the dead ones, you know? They died.

JW: The lampreys?

RW: The lampreys died after spawning and decayed and come against my net. [laughs]

JW: That must have been something.

RW: Yes, but anyhow it was very interesting. I could measure just exactly what water temperature moves them and that sort of thing.

JW: Were they an introduced species in that body of water?

RW: As far as we know, they came in via the Erie Canal…came up into the waters up at that end of the system, but probably hundreds of years ago.[3] I had a wonderful opportunity. Dwight Webster was studying lake trout. And so I was on the crew. I got to live at the Fish Hatchery with two other guys. [laughs] We would go out and we would pull these nets. There would be

[3] Footnote for the historical entry of the lamprey into New York State waters?

lake trout and then, every once in a while, there'd be a lamprey attached to it. We'd bring some back to the...[lab].We had the use of some troughs in the fish hatchery. And we made some [experiments]. It was interesting but…the deadliness of the lamprey versus the size of the fish that it attacked.

JW: Could they overpower large fish?

RW: Yes, if they hit the right spot. It depends upon where they attached. If they attached anywhere near the heart, they were a goner. Didn't matter really what size the lamprey was or the fish. If it was around the heart, they were dead. Because we didn't get the…See, I measured, I counted the scars and where they occurred. I drew out a pattern, a fish pattern and I assigned them to each quadrant or each spot.

JW: Section of the body?

RW: Yes, of the body. So, I had a lot of information on that. Then, we would do some, uh, we would put a fish in with a lamprey to see what happened. [laughs] We also found out there that a little lamprey didn't have much chance of killing a big fish.

JW: Had they had a really adverse impact on the cold water fishes of Cayuga Lake?

RW: Yes. Yes, they were killing them.

JW: Mostly lake trout?

RW: Yes.

JW: Or other species as well?

RW: Well, there was a dwarf, a variety of what was that? A *Clupeid*. I forget now what it was, but it was a nice[food for trout, etc].

JW: A herring-like fish?

RW: Yes. And it was a nice food for the trout and some of the others around the fringes, but it was mainly the trout. The lampreys would attack, say, bass or pickerel and a few other things. I forget now whether they attacked the carp or not. Anyhow, that wasn't much of a problem. It was the trout.

JW: What year did you wind up defending, then?

RW: That was in '54. '54, yes.

JW: Where had you done your undergraduate education?

RW: I went up to the University of Maine at Orono, Maine. I think the more interesting thing, to me, is when I was in high school nobody in the family or even my friends, nobody talked about college. This is the Depression, remember. A bad Depression. There were no jobs. No money. I didn't have any money.

JW: Where did you grow up?

RW: I was born in Blawenburg. That's in west central New Jersey. It was just a little ways from Princeton. After a few months, the family moved to Pennington. Pennington is where I spent my childhood. It was a little paradise. No alcohol, no drugs, no crime. My dad was a Justice of the Peace for a number of years. No crime, so it was a paradise, but we didn't know it till years later, [when] we saw how the rest of the world was living. Anyhow --

JW: What year were you born?

RW: 1923. 1923. I was going to say there are only about six or eight houses in Blawenburg, but Pennington had about 1,600 people, so it was a small town. We had good schools. We had good teachers, because there were no problems. A good teacher couldn't be run out for any reason.

JW: What inspired you to go to the University of Maine, then, coming out of the Depression? You mentioned that people weren't really talking about college.

RW: That's right. We never talked about it. We didn't know anything about how to go to college but there was a friend of my brother's, who [had] just graduated. When I was just about ready to graduate from high school, my…He was a friend of mine. We'd see him up town. He lived right near us and we'd see him all the time. He had his eye on my sister. Anyhow, he was a friend of the family and he was very inspiring. He had just graduated in forestry from the University of Maine and he had a catalogue. And he gave it to me.

JW: A course catalogue? Or another promotional brochure?

RW: Well, actually, they had each year, each semester for each…it varied.

JW: For each discipline?

RW: For each discipline, yes. It's the only catalogue we ever had, but he encouraged me to go. He talked to the family and he said, "They're nice people up there and you don't need much money."And so my…I didn't know what the heck to do. I didn't know what I was going to do. I would need a job if I didn't go to school. Anyhow, we dredged up enough money for one semester, so I went up and well, this Frank Schearer said, "You should give it a try." He was so impressive, he turned out to be a colonel in the Marine Corps. Nice guy. Anyhow, he looked right at me and said, "You ought to give it a try." I thought, "Holy crow, maybe I should."So, we dredged up enough money from my grandparents and whatever for one semester, and geez, I did well. The only thing of it, both the guy I palled around with, Red Welch, from East Millinocket, Maine, he and I both ran out of money at the same time; at the end of the semester we were done. The war was on, so we went down and joined the army. [laughs] Luckily, we got back. [laughs]

JW: In what division did you serve?

RW: Oh, I was in the Air Corps. I went in as a private. They sent me to airplane mechanic school and I went through there and then I worked on what they called the line. The line was B-25 Mitchell bombers. This was down in Texas. I worked on that for quite a few months and then it dawned on me, I would get better pay if I was one of the airmen. Geez, they got a lot better pay. Well, I started off at $21 bucks a month and we were working sometimes seven days a week, 10 hour days. Anyhow --

JW: That's a lot.

RW: Yes, it was a tough grind, but we were young then.

JW: This must have been around 1942, '43?

RW: Yes, right around then. [laughs] Let's see. I applied for cadets, aviation cadets. I would get flying pay. Geez, it was like $240 bucks a month.

JW: That's quite a leap [from $21 per month].

RW: It was outstanding. Anyhow, I ended up as a navigator on a B-29 bomber crew. It was only because I had a few mathematical courses both in high school and college, so that's why…and they needed– I qualified for bombardier, pilot, and navigator, but they needed navigators. I said, "Well," the guy asked me…one of the captains asked me personally if I would go into navigation. I said, "If you need navigators, I'll go. Give it a try." And that's what I did. I liked it. I enjoyed it.

JW: Did you wind up serving in Europe or in the Pacific?

RW: No. You see, the war was almost over. My pal and I…I had an old Ford at that time. We[left from New Jersey and] went to Lincoln, Nebraska. We had had our last leave, 10 days. I only had two leaves in three years. But anyhow, we were on our way to Lincoln, Nebraska. We were assigned there. Every once in a while, we'd pass a train and it would be tooting its horn [or] whistle. [We wondered] what the hell's going on? Now, we'd go through a town and they were ringing the church bells. It was V-J Day and jeez, the war was over. Oh, we couldn't believe it. We had been, well, we were issued all new equipment and we were ready to…we were slated to go to what was it? Tian…there was a little atoll way out in the western Pacific.

JW: Tinian Island?

RW: Tinian Island, where the B-29s operated. We were going to take a new B-29 out there. But then the war was over and you couldn't believe it. We got the GI Bill[for a college education]. It was a godsend.

JW: Did that allow you to return to the University of Maine?

RW: Yes, so both Red and I went back to the University of Maine. I was tempted[to continue on], because I had worked part time in Pennington. There was a chap there that was encouraging me. He would hire me [for short term jobs]and he was a chemist at Rutgers and he would encourage me to do my studies and do well, and he hired me. And I did very well. I found chemistry easy. I was tempted to be…because this fellow was an independent operator as a chemist. If I had known what the salaries were of a chemist versus a forester or a wildlife person, I would have switched to chemistry. We didn't really have much. We were kind of country folks. We didn't have a hell of a lot of information. [laughs]

JW: You wound up going in the direction of science, though?

RW: Oh yes. Nobody ever mentioned the word science. It was biology. I had taken a correspondence course in taxidermy. You see, both my best pal [Ogden Sked]and I, we met when I was nine and he was 10. We were best pals for 71 years. Anyhow, we started off going fishing down at Stony Brook, which went by Pennington. Then we went trapping to make a few bucks during this Depression. Then we started hunting and I got to see some of these gorgeous[birds], like a cock pheasant and mallard drakes, which my mother wanted for food. So, I'd bring rabbits and birds back for food and they were damned glad to get it. But, it was through that taxidermy, where actually I did a rattlesnake, and everybody that came[over]…My brother and I shared a room up on the top of an old house, and all our friends that came up there – "Where'd you get that snake? Did it bite you? Did you see the fangs?" [laughs] "Did you step [on it?]." Anyhow, it was the center of attention. All my brother's[friends] wanted to know about the rattlesnake. Well, anyhow --

JW: And you had stuffed it?

RW: I had stuffed it. After that became old hat, I put it down in a cupboard and I forgot where I put it. And I opened a cupboard and it scared the hell out of me. So, my brother and I put it in different closets.

JW: [laughs]

RW: Until it scared my mother. And my dad, who was very calm and quiet, said, "Roland, get that damned snake out of here." That was the end of it. But, looking back, I should have taken that thing down to the school. I don't think anybody down there ever saw a rattlesnake. That was a mistake. But, see, I didn't really know.

JW: So when you made it up here to the Fisheries Service, or I guess at that time, the U.S. Bureau of Commercial Fisheries in 1954 then, were you still doing the survey cruises as you had in 1949 or were you mostly working on the mainland here in the lab?

RW: Let's see, when I came in '54, Herb [Graham] assigned me to finish up the food habits thing, which I did.

JW: With the haddock?

RW: With the haddock. Then, when I was[attending] seminars and everything…you know, [I thought] we didn't know anything about the[bottom sediments]. We didn't even know if there was eel grass or kelp or anything else [growing]up on Georges Bank. We didn't know what was on the bottom. And we didn't know about the invertebrates. As soon as I finished the food habits thing, he assigned me to do benthic studies. Well, I had to spend most of my time at the MBL studying invertebrates. You know they had the literature. Thank God, they had this tremendous library. Then, of course, we had the specimens by the hundreds and we had lots of material to work with. So that worked out very well. Then, we realized…well, the status of [our knowledge]of the benthic biomass was primitive. All we had were [occasional specimens].

JW: The state of knowledge at the time?

RW: Yes, it was very primitive. I ordered a number of samplers: a Van Veen, Dietz-LaFond, Peterson, [etc].

JW: What are the common names of those organisms?

RW: The common names? One of the most prevalent group[s] were the amphipods. There are a lot of amphipods. That was a pretty tough group[to study] because there was so damn many of them. And isopods. There are quite a few isopods. Of course, there are a lot of bivalves and polychaetes…

JW: Segmented worms?

RW: Oh, yes, those were tough to work with, but I worked with Ralph Smith at the MBL. He put together[a book of keys] [and] I contributed two chapters…He had people contribute chapters. I did the *Cumaceans* and the *Mysids*. Nobody did the amphipods, but we had a good contact up at the university– the museum in Ottawa, the National Museum of Canada in Ottawa, a fellow by the name of Bousfield. In fact, he named an amphipod, *Parahaustorius wigleyi*, after me because we worked with him.[4]

JW: That's pretty incredible.

RW: It was nice because it turns up in a lot of food habit studies that people are doing. Anyhow, we got some keys to the invertebrates of Woods Hole. Then, about…years later, maybe 10 years later, when the systematic ecology program by Mel Carricker from Rutgers was established as a program at the MBL, he and I and several others at the MBL got together and we established a publication. We gave it the grandiose name of *Marine Flora and Fauna of Northeastern United States*. I don't know if it's still going, but we published pamphlets on each group. I remember one was on the barnacles. A fellow by the name of [Dr.]Zullo in Carricker's group was one of the first. He already had the thing all ready, but when he saw that we had a pamphlet series, he

[4]Species named in honor of Dr. Wigley: *Chiridota wigleyi* Pawson (Holothurian), P*hyllosheila wigleyi* Pettibone (Annelida), *Protohaustorius wigleyi* Bousfield (Amphipod), *Rhodosoma wigleyi* Plough (Ascidian), and *Spiophanes wigleyi* Pettibone (Annelida). Species discovered and named by Dr. Wigley: *Chiridotea arenicola, Chiridotea nigrescens, Caprella grahami, Listriella barnardi,* and *Microprotopus raneyi*

gave us the boost and started it. Anyhow, [there] was a big need [for] more identification manuals. After awhile, we got our [Benthos Research]group and then after awhile I was assigned an assistant, Roger Theroux, and he was a very competent young man and a very good worker. And he worked for me for, I don't know, 20 years or something like that, so we got along good. In fact, our major accomplishment is a baseline. We got not only the density, but the biomass of invertebrates for the whole New England region. That was a major accomplishment. I had to have a lot of help sorting examples, but Bob Edwards and Herb Graham helped me get people who were between [jobs and] things. Lots of times I had half-a-dozen people sorting samples, but it took a hell of a lot of samples.

JW: How many years did that take to complete?

RW: It took us like, well, what was I there? I was there [over]30 years. It took us 30 years. But, you see, we started off with just myself and then we finally got[personnel and budget]. One of the first things we had to do was to get a sampler. There was no– You know, a Peterson Grab and a Van Veen and those things. Your line from the ship to the bottom had to be vertical. [Theses grabs were useless in offshore waters.]

JW: That you take a core of the substrate.

RW: That would take a bite. Well, at sea, there was never a day without a current. You're always being[pushed by wind and current]. You put something over the side and you'll see your line angling. All we were getting was like a cupful. We had this big sampler [2.5 gallons]and we'd get a cup full of sand or mud or whatever. And finally, in '55,Smith and McIntyre over in Aberdeen, Scotland, came out with one and they described it and published it in *Limnology and Oceanography*.

Well, we grabbed on to that right away. I sent for two of them as soon as I read the article. The beauty of that is that it had a square frame at the bottom and then was pyramidal. Well, there were plates on opposite corners that had to be in contact with the sediment (it was a spring-loaded bucket)before the spring would shoot, trigger it, shoot the thing square down and take a nice bite. That was a godsend. We were the first ones that promoted that.

I was in close contact with Howie Sanders. He was the benthos guy at WHOI. I always argued with him because he was trying to do quantitative sampling and he didn't have a quantitative sampler. Well, anyhow, we went right ahead with using ours. That's another whole thing. First of all, we had to revamp the sampler. It wasn't half strong enough. Geez, the least little bang against the rail of the ship and it was out of commission. So, I had some made up in Aberdeen and I had some made up locally. To make it really stout, doubled up on stuff, put some heavy plates on it. I put some big heavy weights on it and I made it so it would streamline down. The initial way that we tried it, we had the plates flat and it made a hell of a wash.

That's another thing. We took movies, down in the basement and on the first floor of the lab, there were some four-by-eight tanks. One of them had a window in it and we set that up with a sand bottom and I made up some eggs of all different density, big range of densities, and each one was a different color. We'd make a nest down there, lower the grab down. We were taking, I

think, it was 64 frames per second. Anyhow, we had a fast camera and darned if it didn't work out. A lot of professors used to write in and borrow the film to see how the different[samplers worked].If you lowered the Van Veen, all the eggs always washed right out.

JW: Oh, just blow them out.

RW: They blew out. In other words, there was a pressure wave going down. That was the same with the Van Veen, the Peterson, and…but finally we got to the [Smith-McIntyre]. We had made it so the top of the grab would flop open. It would open up and would go down. And it was very interesting, to me, because we didn't know really what we were doing. But anyhow…[laughs] We could see when we lowered the Van Veenon the different density eggs, there was a little quiver, but they stayed right there.[5] Anyhow, we got a grab, and we modified it, and we built all new equipment to process it [the samples]. We essentially established the one-millimeter screen as the limit, [the] lower limit for macrobenthos. And up to that was a meiobenthos. Then we did another…well, that's another thing was the meiobenthos. First of all, all this macrobenthos…you had to wash it and screen it, bring it back to the lab and sort it, count it, and weigh it. So that's what we did. But the meiobenthos, that was published in *Limnology and Oceanography*. I had Alistair McIntyre, from Aberdeen, of the Smith-McIntyre[grab sampler, process the meiobenthos.], let's see…

JW: Just a quick question. Did they wind up incorporating the modifications into the sampler that you had constructed into their own?

RW: I'm not sure. I never saw theirs and Alistair never said.

JW: Just curious.

RW: But they'd almost have to if they took it out at sea. If we had what they have now, a cherry-picker, it probably wouldn't be so bad, but in those days, we had a boom and it had to be so that they could reach it with a pole and hook it in.

JW: Oh, swing it on board?

RW: Yes. So, anyhow --

JW: Wait. The "milebenthos"…does the "mile" there refer to the depth of water?

RW: No. The meiobenthos is the next size smaller [than macrobenthos][6]. It's between that and a micro-benthos. This is the intermediate one. Well, there was damn little information on that. I devised a way of getting an undisturbed core of the ocean bottom, and I could get it right on deck. I'd flip open the lid on the Smith-McIntyre[grab sampler] and I could take a core. You could see it. Looked beautiful. You could see all the fluffy stuff still on the surface. See it was

[5] Narrator Correction: In this line, Dr. Wigley is actually referring to the Smith-McIntyre sampler.
[6]Benthic organisms are grouped according to size, in categories that include (in descending order): Megabenthos, macrobenthos, meiobenthos, and microbenthos.

protected on the way up by the screen. We put a very fine [hinged]screen on [top of the grab sample].

JW: So you could retain that vertical example of what the substrate had been composed of?

RW: Yes. You see, for the meiobenthos, most of it is in the top centimeter, but we took two centimeters. And I devised a method where I used a plunger to make sure we got exactly two centimeters and then we'd knife it off into a plastic collar and wash it into a jar and then analyze it later. [laughs] One of the things that I laugh about was I had assigned this big fellow, he was a grad student at Cornell. He was a nice fellow and he worked hard. And I assigned him to McIntyre to do exactly what he wanted done on these cores. Well, one of his pals…Tim Robbins, one of Tim's [friends]came into the lab and he said, "Tim, what are you doing?" Tim looked[up]. "I'm shoveling sand. Can't you see?" Well, he was moving one sand gr…He had a needle[-sized instrument]and he was moving one sand grain from one side of the petri dish to the other.

JW: [laughs]

RW: So, we always got a kick out of that. "What are you doing? I'm shoveling sand." That paper that we wrote, we compared the meiobenthos with the macrobenthos from an area south of Martha's Vineyard. We published that in *Limnology*. That was republished in a book, *Readings on Marine Ecology*, which I thought was a nice thing. Worked out good. But I had very close contact with not only the MBL, but WHOI. I was on their committees. I was sometimes [on with] Herb or some of the other people who were on the committees. Also, K.O. Emery. He and I worked together for, geez, I was going to say 20 years. We did joint papers. And he invited me to dive on the *Alvin*. He invited me to dive on the *Ben Franklin*. Now, the *Ben Franklin*, you may not have heard of it --

JW: No, I haven't. I've heard of the *Alvin*.

RW: You've heard of the *Alvin.* Well, the *Ben Franklin* was 50 feet long and it had electric batteries all around the base. [laughs] It was a giant. It was run by Grumman. They wanted some people from the Oceanographic to try it out. Emery called on Bob Ballard and myself, took it down, this is Fort Lauderdale, to try out this submarine.

JW: When was this?

RW: [laughs] God, it's probably around '70. Something like that. Anyhow…you'd get a kick out of this. The first trip out, they had hired these ex-Navy pilots as pilots for the[sub], at least three of them, for this big submarine. Anyhow, they were good guys to work with. The first trip out we go out…we headed east from Fort Lauderdale and we went out I think it was about 300 or 400 meters[water depth, several miles from shore]. Lowered down. [laughs] You couldn't have written this is if you were writing a novel. As soon as we touched the bottom, all the [electrical]current went off [and] all the lights went out. The little motors were [slowing] [MAKES WINDING SOUND]. They were winding down. We thought, "Oh my God, what the hell are we into?"Come to find out, the main fuse had blown. They got it[fixed], after much

colorful talk, they got it going again and we continued. We made about a half-a-dozen dives. It was very interesting going because what we would do is when we were under way, we'd get up front and look. And then if we were sitting still on the bottom, we could go out [to]the back, back or front, and get a close look at the bottom.

JW: What species did you see?

RW: I would say the most common thing that we saw was *Cancer irroratus*, the rock crab. There were hundreds of them. Oh, the other thing that I thought…I thought it was unique, but I wasn't able to follow up on it, was the squid, *Illex*. I saw them rest on the bottom. I thought they were asleep. [laughs] The tail would rest on the bottom. They would have their tentacles gathered together and that would rest on the front and here they were, sitting on the bottom, angled like that and they wouldn't move. I didn't see anything[such as an object in their tentacles]. I didn't see anything move. I thought I would see some of the…[their physical features]…[such as an] operculum or something…flat…but anyhow, that was one of the few things.

JW: I guess maybe they were just resting?

RW: As far as I know they were.

JW: Interesting.

RW: I thought that was a nice find. But generally, oh Jesus, you wouldn't believe this. It was a Mickey Mouse arrangement. Their mothership, Jesus. We came up one time and the mothership was 18 miles away. If we were in any trouble, they would have been worthless.

JW: That would have been tough.

RW: Yes. By and large, it was a nice outfit and we got along good, but our outcome or [opinion] was [that] it was too big. It would take forever to try to get a sample in this great big ship. *Alvin* was much better.

JW: I was going to ask before, too, if you have any recollections of the Woods Hole community from the mid-1950s, when you arrived? What was both the Bureau like then and then also the community at large? You might be able to describe the process of settling in.

RW: Most of the bureau work was [oriented toward] trying to get [fish]samples and how to take them and where and when. They were trying to set up sampling programs of how to do that. They spent a lot of time with different kinds of trawls and things like that. And then, the science people like at the MBL, geez, they were great. They were very accommodating. See, I had very close contact, of course it was later, though I had the closest contact with Professor [Harold H.] Plough. Both he and I were corporation members of the MBL. He was professor of zoology at Amherst College. And I was having trouble identifying some of the ascidians. So of course, I went over to the MBL [and] there's Dr. Plough. He welcomes me in and we became close friends. He came over to the lab…never used the elevator. Always carried a leather bag and

walked up the stairs. He was about in his 70s and I invited him on a cruise. I asked him if he would like to go on a cruise. He said I would very much like to. Geez, I didn't know whether he'd make it or not. He was a born teacher and there were two college students at the same time on the same watch. Anyhow, they just loved this guy. [laughs] He would be out there on the deck and those kids were gathered around. At the mess hall they were asking him all kinds of interesting questions. He had studied in Germany as a young man and he had a lot of interesting stories and so he was very good with students. And to top it off, he dedicated a science book on ascidians to me and he named a species after me, which I thought was very nice. He was a very thoughtful guy and we got along good.

JW: Was that the species that you mentioned before?

RW: No, I've had about six species named [after me]:*Holothurians* and a couple of worms, and this ascidian [and an amphipod].[7] Also, I named five, but I only named two after people. One of the isopods was kind of black but not really totally black, so I called it *nigrescens*. I had a year of Latin in high school. That was the best I could do. *Nigrescens*. Then one was a sand dweller, really a sand dweller, and I called it *Arenicola.* And then…

JW: *Arenicola* is that the name of the lug worm?

RW: I think it is. I think it is, but one of the amphipods I named was [inaudible] *clymenella* that I found. Oh, I named that after [Dr. J. Laurens] Barnard. He was a great amphipod specialist from the West Coast. I didn't get to name one after Bousfield, but I would have. And I had [found] one on the cruise where we almost sank. I had one isolated, geez, it was a big one and it was totally different. I had put it in a vial with a cotton stopper in the collection, so when I got back, it'd be right there.

JW: Was that one of the ones that was lost?

RW: That disappeared. And I never saw one like it since. That was always a big loss, I thought.

JW: When you were aboard the ship during that storm, where were you onboard the ship?

RW: [laughs] I was in the wet lab. See, Fred Lux[a fellow biologist] was the only other guy that was up…[and about]. The other three guys were seasick. They were down in their bunks. They were down there from the time before we even left the [Nantucket] Sound, I think. They were very subject to seasickness. So, they were in their bunks. Fred and I[were okay]. As things got worse and worse, you couldn't go outside. I used to keep tabs. I'd go up to the bridge [to] talk to the captain. He was in contact with the Lab and things kept getting worse. Well, anyhow, I ended up with Fred and then also [four fishermen]. We all had our life-preservers on. And the strongest guy on the vessel, the strongest fisherman, was "Jack" John Walsh. Geez, he had big muscles. The only way we were going to[get out], if we tipped over…and we kept getting buffeted, the wind hit us from the starboard side. Well, the starboard side kept getting higher and higher, and there was a door – I forget what they call that on a ship – but anyhow, it had these dogs, wheel-operated dogs. We figured he was the only guy that could possibly get that thing started and

[7]Narrator Correction: During his career, Dr. Wigley named five new species of benthic invertebrates.

maybe a couple of the other fishermen. They could open that and we could escape. But we were wedged in corners and we were going up and down, lurching side to side, but the worst thing is, it went for hours. Hours and hours and hours. Then, when it went over on its side, we figured this is it. But you know? The people were very calm. One of the few comments was from one of the[fishermen]. There were let's see, there were three…four fishermen. Four fishermen and Fred Lux and I. And the comment that was made…one of the fishermen said in a low voice, he said, "This is worse than D-Day." But, you know, we were resigned to going down. We couldn't move. Oh God, but anyhow…

JW: That's really saying something…that D-Day comparison.

RW: It was.

JW: Definitely it was.

RW: And that was about the only thing that was said. We figured that's the end. That was something. A psychologist should have analyzed the six of us, but we were wedged where we could, in between whatever was there. The tanks. We had big life-preservers on and we had extra preservers. Jesus, I don't know if we'd ever[have] gotten out.

JW: The ship eventually righted because the captain continued going forward, right? Full throttle?

RW: Yes, well, it was the chief engineer. In our article, we never mentioned much about the captain. I think the less said about that, the better. But anyhow, Captain McCauley was knocked out[of his bunk], crawled [through the engine room]over to the telegraph, and gave it the speed without the captain's knowledge.[8] He just goosed it because he had had experience off Nova Scotia in a fishing boat in exactly the same thing. So, he knew what to do and he did it and it pulled us right up. We went over briefly another time, but it was just nothing. Then, when we came back[to port], we went right to the shipyard. But the thing of it is, I don't think anybody at the lab really knew what happened. See, they never saw it. We went into the shipyard at Fairhaven and there it was. God, it was blown up. Geez, it was stripped.

JW: Had the *Albatross*[*III*]sustained a lot of external damage in that incident as well, or was it mostly…

RW: The only steel things that moved were those two doors and it cleaned out that whole room. Of course, I don't know what went with the life boat, whether the stanchions went with it. I know a lot of the stuff[disappeared], when the anemometer blew apart at 92, we knew were in big trouble. [laughs] That's why I'm glad to get it on the record. [laughs] But we damned near died.

JW: Are there any parting thoughts or other things that we didn't cover that you'd like to throw in?

[8]Narrator Correction: Frank McCauley actually served as Chief Engineer aboard the *Albatross III*.

RW: One thing. I'd like to say that we found the first *Pogonophorans*in the western Atlantic. *Pogonophorans* are deep-water…but it's a new phylum. *Pogonophora* is a new phylum. Never heard of it when I was in school.

JW: What type of animal?

RW: It's a worm-like animal and the most interesting thing [about] it, to me, was that there's no internal digestive tract. It was all external appendages. It's a new creature. I still don't know much about them, but I know that the genus that we found was *Siboglinum.* [In the family]*Siboglinidae* or something like that. Anyhow, that was the first record of that.

JW: What year was that?

RW: Oh, gee, I have no idea. Then, the other one that we found that was very interesting to me, anyhow, was *Praunus flexuosus*. *Praunus*is a *Mysid*. We found that in the southwest corner of Cape Cod Bay. I thought it was new, for just a week or so. Then when I checked with the foreign literature, there it was. [laughs] It occurs in the English Channel. Southern England and northern France. It's the only place in the world it occurs.

JW: Was this the first finding of it here in the Northeast?

RW: Yes. That was the first find.

JW: How far offshore was it?

RW: It was fairly close in, as I recall. Fairly close. And the last I knew, it had been found as far north as southern Maine, but I haven't been able to keep up in later years. That was a very nice find. Another thing that I thought was…well, one of the best things that I think we did, besides making our 30-year survey, was the red crab survey [on the continental slope] that we did on one trip. We had these stratified, random sampling stations and we did it on a shoestring. See, my budget never was very big. Anyhow, I borrowed the sled from another project at the lab. I rented the camera, pinger, and lights --

JW: Was this the underwater benthic sled?

RW: Yes.

JW: Really?

RW: Yes.

JW: I just interviewed Mike Corbett this morning, actually, and he was talking about TUBS [Towed Underwater Benthic Sled].

RW: I don't know. Did they make any surveys with it?

JW: I don't know if we got around exactly to the extent that it was used, but…

RW: Anyhow, we used it on that cruise and let's see, I had to buy two small trawls and the film. We got a bargain on the development of the film, because we worked through the prison system of New Mexico. [laughs] They developed the stuff. Geez, they did a beautiful job. So, my costs were just about a couple of thousand, maybe, at the most.

Not only did we get a biomass. See, we got pictures of crabs and then we got a trawl haul. We sexed and weighed and measured all of them and…so we were able to establish a biomass and then we also established that there was a migration from the deep water to the surface, or to the shallow. Ordinarily you'd say oh, yes, the little ones occur in the shallow water and the big ones would be down in the depth. Just the opposite. I used a dredge at each station. Darn if at one of our deepest stations, we got an eight-millimeter [carapace width] red crab. A beautiful little specimen. Then, as we measured them, we averaged them at all these intervals, all the way to the shelf. They got bigger and bigger and bigger all the way to the top.

The point is that you can do a lot if you can borrow a few things. Borrowing that sled was a big thing. My friend Keith Smith was responsible for that.

JW: Up at the Gloucester lab?

RW: Yes. Well, he was down here at the time. He was a good guy. [laughs] So, that was that. Let's see, was there anything else? Well, in other words…I was on WHOI committees and things. I don't know if there's anything else.

JW: Where did you first live when you arrived in 1954?

RW: I think it was in Falmouth. I think I had a room in Falmouth. Then I got married in '55, right after the near sinking.[9] [laughs]

JW: Opportune time. [laughs]

RW: Yes. So, I have[a lovely wife and] two lovely daughters as a result. I don't know if there's any[other items]…because we did a lot of work with K. O. And we collaborated with a lot of people. I even sent specimens to [Vladivostock] on Kamchatka in Russia.

JW: Really? To a lab there?

RW: Yes. There's a little lab. I got acquainted with them. They were isopod specialists. I've forgotten their names.

JW: Then the Russians were doing their own benthic studies around Kamchatka?

RW: Well, I don't know about that. No, they were just studying[taxonomy]. I think they were mostly just doing the early stuff. But, anyhow. So, maybe that's it.

[9] Narrator Correction: The date of Dr. Wigley's marriage is 1956.

JW: If you think of anything else, we can always try to do a follow-up interview and pick up at a later date.

I'm going actually to sort of end the interview as I would normally begin them by just reading off the introduction here. This interview was being conducted as part of the Voices from the Science Centers project funded by the Northeast Fisheries Science Center. It's also a part of the Voices from the Fisheries project, supported by National Marine Fisheries Service Office of Science and Technology. I'm Josh Wrigley, Project Manager of Voices from the Fisheries, and today I was speaking with Roland Wigley at 15 Carlson Lane [Falmouth, MA], which is where the Social Sciences Branch is located. The time right now as we conclude the interview is 3:19. As the interview began, Roland was talking about the storm of 1955 and the incident in which the *Albatross III* nearly capsized offshore. Thank you very much for a terrific interview, Roland.

RW: It was my pleasure. Thank you for having me.