BS: This is an oral interview with Dr. Rita Horner, conducted by Brian Shoemaker at her office at the University of Washington on the 18th of August, 2000. The interview is part of the Polar Oral History Project sponsored by the American Polar Society and the Archival Program of the Byrd Polar Research Center on a grant from the National Science Foundation.

Dr. Horner, it's a pleasure to be here and I've known about you for a long time, known you very well. But, I really don't know much about your personal life. And we're interested in your personal as well as your professional life as far as they affect one another. And most of our oral interviews turn up things which, like the Van Allen story, which are really a piece of history. And we all sign our operational reports. You're one that's in charge of managing a program, and you're a researcher and we know your papers, but sometimes the personal histories escape us, so we're interested in the work you've done, but what you did personally that went along with it, and that type thing. So, it's your interview. However you want to direct it, I'll kind of help you along. That's my job, as opposed to a reporter trying to make something out of it.

How did you . . . where are you from and where did you get educated?
RH: I grew up in Northern Wisconsin. I did my undergraduate degree at the University of Wisconsin, a Master's degree at the University of Minnesota, both in botany. And then I took some time off and eventually came back as a graduate student at the University of Washington. As an undergraduate . . . well, my Dad was a forest ranger, and so that's how I sort of got interested in the outdoors and science. And I started out as a chemistry major and very quickly realized that that wasn't going to do, so I switched to a botany major. And had a course in freshwater algae from a man at the University of Wisconsin and I enjoyed it very much. And then had the opportunity to go to the University of Minnesota where there was a man who worked on marine algae and he actually had gotten his undergraduate degree here in the Botany Department at the University of Washington. Well, after being around him for part of the year, he said, "Well, if you're really interested in the algae, you'd better go to Friday Harbor." So, I immediately said, "What's that?" And he said, "Well, I happen to have a brochure here," and he gave me a brochure that told about the Friday Harbor summer classes. And one of them was a course in marine algae taught by one of his friends from the University of British Columbia. And I said, "Well, this is all well and good, but it's going to cost money to go there," and he said, "Well, we can handle that." And it turned out that there were some scholarships in the Botany Department for people to go to biological stations during the summer. And this becomes important later on.

So, I went up to Friday Harbor - got a ride all the way from Minneapolis to Shaw Island which is the ferry stop before Friday Harbor, with the plant ecologist from the Botany Department and his wife and their two dogs. And so, I got to Friday Harbor, took the marine algae course, spent the second part of the summer doing research for a Master's degree. By then I had decided what organism I wanted to work on and I (deflected) at Friday Harbor. And that was fine. And it turns out that my grandmother used to go from Idaho to Friday Harbor on her vacations back around the turn of the century or shortly thereafter. But, anyway, I went to Friday Harbor, went back to Minnesota to finish my Master's degree the following year and decided I wanted to go back to Friday Harbor for the summer.
Really fell in love with the area the first time I was there. So, the man who was teaching the algae course employed me as a teaching assistant for that second summer and that worked out very well and I could still continue to do some research. But, I had a job starting in the fall in the pervarium at the University of California in Berkeley. So, I went down there, but decided that perhaps that wasn't exactly what I wanted to do and I came back up here, went to Friday Harbor again, and decided that I really would like to stay in the Seattle area. So, Dick Fleming, who was the Director at the time and the Head of the School of Oceanography, suggested that I talk to George Anderson.

BS: *The Richard Fleming?*

RH: *The* Richard Fleming, yes, of the ocean. So, I talked to George Anderson. He had just finished a Ph.D. under Tommy Edmundson in the zoology department and he was just getting started on a research project that had to do with the marine environment. And he hired me, even though neither one of us really knew what we were going to be doing.

BS: *Now, who hired you?*

RH: George Anderson. And that worked out very well. He was going to be doing some productivity work on marine phytoplankton. Well, I didn't know very much about productivity work and at that time I didn't know very much about marine phytoplankton either, for that matter. But, I came here and worked for several years. Learned a lot about productivity and a lot about phytoplankton. Also had my first oceanographic cruise on the department's old *Brown Bear* - a wooden ship built as a resupply vessel for the Aleutians back in 1934.
BS: *What date was this cruise?*

RH: Well, the cruise was - I don't remember - probably about 1960 or something like that. So, it was in January, and January in the North Pacific isn't exactly the greatest place to be. We went out and as we got to Neah Bay it was like, if somebody tells you, if you cross this line, I'm going to get you? Well, it did. And I have never been so sick in my life as I was for the first week of that cruise. But, I wasn't alone. Everybody, including the captain of the ship, everyone was sick. After that, the water flattened out and it was very nice, very pleasant. And so the cruise was fine. There were going to be cruises, then . . . this was the beginning of the university's. . . oh, I think it was the Department of Energy or . . . yeah, Energy cruises, off the coast about every two months. And that went on for a number of years. Well, I stuck with it for a couple of years and then decided I wanted to teach. So, I got a job at Yakima Valley Community College over in Yakima, Washington, where I taught general biology and oceanography for a couple of years. And then, a man that I had worked with here, Tom English, who is probably well known to many people in the polar community, said, and along with the professor I had had at Minnesota who was, by then, here, said, well, if I wanted to work on phytoplankton, I needed to go to Norway. And Tom said, "Apply for a Fulbright." So, I applied for a Fulbright grant fellowship, got it, and went to the University of Oslo, Norway. The University of Oslo had had a program in the taxonomy of marine phytoplankton for, at that point, about 75 years and it was the place to go if you wanted to learn phytoplankton. And there had been a number of other Americans who had gone there and learned phytoplankton. A couple of them got their Ph.D.s in Norway. One of them actually was here in this department when I was here, working with George Anderson. But, he never managed to get his Ph.D. So, I went to Norway. I spent a year there. Enjoyed it very, very much.
BS: *Which year was that?*

RH: That was 1963-64. Came back and by then, the professor that I had had for my Master's at Minnesota was here at the University of Washington in the botany department, so I came here as his graduate student.

BS: *Who was that?*

RH: Richard Norris. Although his main claim to fame was with the red algae, by then, he had also switched to working on phytoplankton and so it was really a good field. But, when I was trying to figure out what I wanted to do, Tom English said, "Aha! Why don't you go to the Arctic?" When I was in Norway, he had actually shipped over a whole bunch of samples that he had collected during the IGY and I had spent much of the year in Norway analyzing those samples. So, he thought, "Aha!" he had found somebody who would be hooked on the Arctic and I should go up there and do something.

BS: *Before you do that, can you explain red algae as opposed to other types of algae?*

RH: Oh, red algae are big seaweeds that you find out along the coast attached to rocks or whatever. The red algae and the brown algae are the ones you're most likely to see along the shores. And phytoplankton, of course, are the plants, the mutually single-celled plants that drift in the water. Well, when Tom came up with this brilliant idea that I should go to the Arctic, he was just about to start a new Arctic program. And I think he thought of me as a guinea pig, but, of course, I immediately said, "Tom, it costs money to go to the Arctic," and he said, "We'll write a proposal to Arctic Institute." So, we wrote a proposal to Arctic Institute, it was funded by the Office of Naval Research through Arctic Institute, and I headed off to Point Barrow.
There had been some discussion with the Navy, their Arctic program, and with the Director of the Laboratory at Point Barrow about whether or not they should allow this single female to come up there and spend the summer.

BS: *Which year was this?*

RH: It was in 1965.

BS: *Your grant was with whom?*

RH: With the Arctic Institute of North America. So, there was a lot of discussion and Tom enlisted the help of Norbert Untersteiner in the atmospheric sciences department here, and although I didn't really know Norbert, the two of them managed to wear down both the Navy and the Director of the Arctic Research Laboratory and I was allowed to go to Point Barrow.

BS: *Did they have Eskimo women working there then?*

RH: There were one or two, but there weren't any . . . the only single female scientist who had worked up there was Charlotte Holmquist - a limnologist from the Natural History Museum in Stockholm, Sweden. It was made very plain to me that I was to behave myself while I was up there because this was a first time thing, to have a single woman up there doing research. Well, I flew up, as it turned out, with Phil Church from the atmospheric sciences department, and as we got on ____ Air Alaska, the plane was the only airline that flew between Fairbanks and Point Barrow at that time, he said, "Dinner will be fried chicken, potato salad and either an apple or an orange." He was right. That's exactly what we had. And then when we got to Barrow, and of course, we'd shipped all our stuff up early . . .
BS: *Now this was which year?*

(RH) This was '65 - the spring of '65. So, we got to Point Barrow, and Phil said, "Now, look around a little bit and see if you see any of your boxes." And so, I looked around and sure enough here were a goodly number of my boxes, along with his, in the snowbank, just kind of around, next to the runway out there.

BS: *At the airport?*

RH: At the airport.

BS: *Downtown?*

RH: Downtown in Point Barrow. Things were a little casual up there at the time. So, we kind of wandered around and kicked the snow off some of our boxes and pointed them out to people and said, "We'd like to have these out by tomorrow," and the lab sent somebody in to pick them up. OK, that was fine. So, that was my introduction to Point Barrow and the airport there. Got out to the lab and I found out that I would be sharing one of the Quonset huts with a married couple from Colorado at the time. They had one end of the hut and I had the other. And that worked out very well. And I had a lab all to myself in the old laboratory building and things worked out quite well.

BS: *Who was the couple?*
RH: Bob and Claire Lewellyn. And I worked very hard that summer. I behaved myself as best as I could. And things seemed to work out OK. So, I came back in the fall with a lot of samples, a lot of material to work on over the winter, which I did. And I went back again in the following Spring.

BS: *Did you work out on the ice?*

RH: Yeah. We went out on the ice. I had . . . let's see. There were a number of the natives that went out with me in the field. Of course, they would never let a woman go out by herself under any conditions. And so, Pete Sevalek was one of them. Let's see if I can remember any of the others.

BS: *Kenny (Tewbeck)?*

RH: Kenny didn't actually go out with me. He provided the people that would go. One of Kenny's sons went out with me frequently. Robert (Atkiyaha), I think his name was, was another one who went out. And we would go out in a Weasel and cut holes in the ice and I would sample through the ice. I think at that time, I was looking at phytoplankton. And, like I say, I got a lot of samples and came back and worked on them over the winter. Went back up. That year I had a roommate - a woman who was looking at insects for somebody from the University of Hawaii.

BS: *Remember her name?*

RH: No, I don't. But, I do remember that there were a number of evenings when I was locked out of our living quarters because she was entertaining guests. Maybe I shouldn't say that.

BS: *I think you should.*
RH: Finally, after several evenings of this, I decided to speak to the Director, and charged into
his office early one morning and said, "Max, I've had it!" And he puffed on his pipe and said,
"John, come in here," referring to the Assistant Director, John Shindler. And at that point, it was
decided that John would move in with Max for the rest of the summer because both of their
families were gone and I would move into the Shindler's house so that I could get some work
done and wouldn't have to worry about where I was going to be sleeping that night. And that
worked out very well.

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BS: But, they didn't discipline this woman?

RH: No. She was not disciplined.

BS: Max and John just avoided trouble by ignoring it.

RH: Yes, that's true. She got herself into some other scrapes that summer as well, and I don't
think made very many friends up there, but . . .

BS: So, you had a very productive summer.

RH: Yes.

BS: You mentioned cutting a hole in the ice and then getting your samples. Did you scrape the
bottom of the ice or . . . ?
RH: At that time I didn't. I was strictly interested in the phytoplankton, and so I . . .

BS: *It was just the water.*

RH: It was just the water column, yeah.

BS: *Was it . . . how far down?*

RH: Well, we weren't out all that deep, so . . . or out that far, so the water was fairly shallow. It was maybe 10 meters or something like that most of the time. And part of that was just a problem of how far out you could go because of the shore lead that was not too far off shore. And I think, because this was also kind of a test case in terms of having a woman up there, they held me on a bit of a short leash in terms of how far and how far away I could go somehow. And, since I was new enough to all of this, why, I had to rely on their judgment to some extent. I'm trying to remember, I think it was . . . '67-'68. The next summer, I went back and had a young undergraduate go up with me to help in the field and also to run nutrient samples. Before that, I had had those run after I got back down here.

BS: *Did you have your doctorate?*

RH: No, no. I finished my doctorate in February of 1969, and got a job at the University of Alaska that would start in the fall. So, I stayed on here, working with Tom English's group and by then, he had a big program that was out on T-3 and had people going out there during the summer and had people there, actually, all winter long. And I would provide them with supplies, if I could, when I was at Barrow, even while I was still a student, if there were things that they really needed or whatever. So, it worked out well for both of us. I stayed on here from February of '69 until that fall, working with Tom's group and getting some more of my own work done,
and then I moved to Fairbanks. And I was an Assistant Professor in the Institute of Marine Science up there. I continued to write proposals. Got funded from ONR. Worked a lot with Dr. Garret Alexander, who had been at the University of Alaska for a number of years by then. And we started a program to look at the ice algae and the phytoplankton at the same time.

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And this was to be done at Barrow. We had a technician named Bob (Krasby), who worked with us and I had a graduate student, Grant Matheke, who had been a Navy underwater demolition team during his service years, and Bob and Grant decided we had to do our productivity measurements in situ, in other words, actually work in the ice, rather than bringing the samples up and then trying to do our experiments in a culture chamber or something like that because we didn't really know what kinds of changes were going to occur when we brought the cells up. Yes, we could cut ice cores very nicely, and all of that. But, as soon as you brought those ice cores up from the relatively warm -2 degrees Celsius in the water to -35 C of the air temperature, and also the very bright light at the surface, why, we really didn't know what that would do to the organisms.

BS: How did you examine them in situ? Did you have a microscope out in the field?

RH: No. What we did was, we had these two guys, Bob and Grant, dove under the ice and this was one of the first times . . .

BS: Now Bob was . . .?

RH: Bob Krasby. He was our technician. Grant had a lot of diving experience already. Bob did not. He learned how to dive one winter, diving under the ice in Harding Lake, just south of
Fairbanks. And we went up, usually in January, and had a hut out on the ice. But, for some reason, Max would not let us cut a hole in the floor of that hut so we could have our dive hole right there in the building. Our dive hole was next to the building. That was OK. The building was still warm and the guys could run back and forth pretty fast. So, Bob devised some little sampling chambers that we could use. They were actually plastic, just plastic cylinders that had teeth on one end and a cap on the other and we could put these up into the ice, we could adjust them with carbon 14 to measure the primary production, and then we could . . . the divers would go back down, cut these cores out of the ice, and preserve them - we preserved them out in the hut - and bring them back to the lab. And measure the primary production that way. We could also use these cores to get samples to do chlorophyll analyses and to look at the cells to get material to look at and enumerate the cells that were in the ice. And so that worked out quite well. We realized that there were some problems with the method, but it was the best that we could do and it was the first time that primary production measurements had been made in situ for the ice organisms.

Well, we continued this project for about four years, I think. And about the time we applied for a renewal of our grant, by then, we were getting money from the National Science Foundation Polar Program.

A reviewer of our proposal told the Head of the Polar Programs group that he had already done all the work there was to do on ice algae in the Antarctic, and so there was no sense in giving more money to those woman in Alaska.

BS: *Who was this? Wasn't Anderson, was it?*
RH: Uh. . . no. So, anyway, he said he had already done all this work. No sense in giving this women in Alaska any more money, and our funding stopped. Needless to say, we were not very happy about that.

BS: That's NSF funding.

RH: That was NSF funding.

BS: You still had ONR?

RH: Well, by then most of our funding was coming from NSF. I don't remember exactly how the changeover occurred. At that point, this was 1974, I guess, and I decided that I really was not very happy staying at the University of Alaska. So, I resigned my position, came down here, and for a while, did not have a job. I was essentially on leave. Then, a new program started up - the Outer Continental Shelf Environmental Assessment Program. This was to learn all there was to learn about the Alaskan environment, both terrestrial and marine, with regard to the oil exploration that was going on up there. Oh, I guess I should go back a bit.

One day about, it must have been in either, probably in the spring of 1973 - fall of 1973 - Max Brewer called me into his office and he said, "We're going to be going over to Prudhoe Bay to put a boat up for the winter and I think you ought to go over there and collect some phytoplankton at Prudhoe Bay." Now, that must have been about 1972. So, I said, "OK." And we went over to Prudhoe Bay and it turned out that I was, basically, one of the first women to go to Prudhoe Bay. It was rather amusing, standing around in the Arco . . . around the Arco coffee pot and having all these people say, "There's a woman over there." I mean, you don't look terribly glamorous wearing flight pants and a parka. But, it was amazing how surprised people were to see me there.
The other thing that happened was in . . . during all this time that I had been working up at Barrow, needless to say, I wanted to go to T-3. And there had been a lot of fuss and hassle about that. And no, no, no, you can't go out there. You can't go out there. Well, finally, one day Max let me go out on a turnaround flight - just a quick resupply.

BS: *When was that?*

(350)

RH: It was in maybe '70 or '71. I can't remember for sure. But, it was in the spring. And so I got to go out for a turnaround flight. And I still wanted to go out there and do some work. But, no, no, no, no.

BS: *Were you the first lady out there?*

RH: I think somebody . . . well, I don't know. I may have been.

BS: Vera?

RH: No, Vera hadn't been out. Finally, in the spring of 1972, a graduate student from the University of Alaska wanted to go out and do some work and the University of Southern California also had a big marine biology program out on T-3. And a person from there, named Hester Kobiyashi, also wanted to go out to do some sampling. So, they finally decided that the three of us could go out together.

BS: *Who was the third one?*
RH: I can't remember her name. She was a graduate student in physical oceanography at the University of Alaska. And so, the three of us went out together. And they let us go out for two weeks. We had our own living quarters. We had our own honey bucket that, I found out later, one of my friends in the carpenter shop by the name of Harry Brower, had written on the honey bucket lid, "Rita's Throne - Queen Rita." And so that was all fine and dandy. Then, one day, while we were out there, after oh, I don't know, two, three or four days, something like that, one of the guys that was doing maintenance and such out there, said to me, "Is there anybody down in your hut?" And I said, "I don't know. Why?" And he said, "Well, I have to go down and empty the honey bucket." And I looked at him with surprise and I said, "What do you mean, you have to go down and empty the honey bucket?" And he said, "Well, it certainly needs emptying." And I said, "Yeah." And he said, "Well, I'd better go down and do it." And I said, "No way. That's not your job." I said, "The guys empty their own. There's no reason we can't empty our own either." I made a friend, let me tell you.

BS: Who was that?

RH: I don't remember who it was. It was one of the young Eskimos, anyway. And I had known him.

BS: Charlie. It wasn't Charlie Br______?

RH: No.

BS: Charlie Hobson?

RH: No, it wasn't Charlie Hobson.
BS: He wouldn't do it. I spent two months out there with him.

RH: Well, Charlie Hobson was one of the kids that used to out on the ice with me at various times. I knew Charlie pretty well. Actually, Charlie was up there - no I guess it was.

BS: He spent 6 months on and 6 months off for a number of years.

RH: Yeah. No, I don't remember who it was now. But, anyway, needless to say, they were very surprised to find out that the women were able to empty their own honey bucket. Of course, we had to do it ourselves back in camp at the lab, so it really wasn't a big deal. And we spent two weeks out there. I worked primarily with . . . it was really too early for me to be out there because it was in April.

BS: Which year was that?

(400)

RH: That was 1972. It was really too early for me to be out there because there weren't - the phytoplanktons just don't show up that early in the season.

BS: Where was it? Where was T-3?

RH: I can't remember.

BS: Pretty far north.

RH: It was pretty far north, yeah.
BS: *The reason I'm saying that is that I was on in '71 and it was 88 degrees. And it went south from there.*

RH: Yeah. I just don't remember.

BS: *Probably 85, 86 degrees.*

RH: Yeah. I worked with a fellow that Tom English had out there at the time. A man named Allen Moore. And cored the phytoplankton samples using the T-3 hut and hydrohole and then helped Allen with what I could do to help him. Like I said, it was really too early for me to be out there, but I think I had been sent out more as a baby-sitter, housemother than anything else anyway, because at that point, anyway, Max knew me, but he didn't know the other two at all. And so, I think I was out there sort of as the housemother. He never really came out and said that, but that was the impression that I got.

In the summer of 1973, in that spring, the Coast Guard had a project up there called WEBSES - Western Beaufort Sea Environmental Study, or something like that. I can't remember exactly. And the Head of the Marine Science Institute at the University of Alaska, Don Hood, had suggested that perhaps they ought to do some phytoplankton work. Well, the fellow who was in charge of the program for the Coast Guard, Gary Hufford, agreed that that would be OK, and agreed that it would be OK for me to go out there - to go out on the icebreaker. But, of course, the Coast Guard had to make a decision. And they finally did. They decided that I could go, and they were very unhappy about it.

BS: *You were the first on a Coast Guard ship?*

RH: The first time that a woman had ever gone out on a Coast Guard icebreaker.
BS: *They rescued one.*

RH: Probably, yeah.

BS: *And the former Rescue Service, you know when they had the Bear up there, what did they call it? It wasn't the Rescue Service. Well, the forerunner of the Coast Guard - they carried a lot of women around.*

RH: Yeah. But, this was the first time that the modern Coast Guard had had women out there. I never really found out exactly why they finally decided I could go. It turned out that the operations officer was a young man who had come up to Barrow before with a class from the Navy Postgraduate School that was taught a physical oceanography course that was taught by a man who had been a professor here in oceanography and whom I knew - Bob (Plaquette).

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And Bob had me speak to his class to tell them something about Arctic biology and that had been the previous year. So, I don't know whether the fact that this young Operations Officer, you know, at least knew who I was might have had something to do with my getting to go out or not, but I went out anyway. And, of course, within the first two hours, I'll be you every single person, crewman on that ship, walked by the lab I was going to be in to see what this woman looked like. We stayed in the science berthing area that was also where the pilots stayed and the male scientists - it wasn't going to bother them any. They just made a sign to put on the door of the head that said, "Woman" on one side, and "Other," on the other side. And about two-thirds of the way through the cruise, one of the pilots looked at me and he said, "What does 'Other' mean?" And I said, "That means you," and he was quite surprised. He hadn't realized it all this time.
really what the sign was for. But, also about half way through the cruise, I went down to get into my . . .

BS: *Which year was this?*

RH: This was in '73. I went down to go to my room for something and there was a big sign that said that they had painted the floor, painted the deck, and I couldn't get into my room. So, I found the Ops Officer who was the person who was the person who was sort of watching over me, and told him I couldn't get into my . . . I guess I just sort of kiddingly said, "Hey, what's going on? You guys painted me out of my room?" And I didn't care. It wasn't going to bother me for a while anyhow, that I couldn't get in, and I figured the paint would be dry by the time I needed to go to bed. And he got all upset and said, "Just a minute," and marched off and when he came back he said, "OK. You can get to your room by doing thus-and-so." And I said, "OK, fine." He said, "You know you haven't caused anywhere near as much trouble as everybody thought you would." And I thought that was quite a nice compliment.

(500)

BS: *What kind of work were you doing?*

RH: I was doing phytoplankton.

BS: *Collection?*

RH: Just collecting samples and . . .

BS: *Where was this? Bering Sea?*
RH: No, this was in the . . . well, it was supposed to be in the Beaufort Sea, but the ice was so bad, they couldn't get around into the Beaufort Sea, so we boarded by helicopter off Wainwright and then stayed in the Chukchi for a little bit and then finally got around into the Beaufort.

BS: *What are the differences in the plankton that you catch close to shore as opposed to out a little further?*

RH: Closer to shore you're more likely to . . . well, I shouldn't say that. Actually, the species are fairly similar, but closer to shore, often there was more there than there was farther off shore. But, remember these are some of the first phytoplankton samples that were collected kind of in that not-too-far off shore area, but certainly not well out into the central Arctic. At the end of the cruise, we got back to Barrow and I was walking down the hall and the wife of one of the tundra people - tundra (bio) people said, "Hey, I haven't seen you around for a while. Did you go out or what? Did you go down to Fairbanks?" And I said, "No, I was out on the icebreaker." And she said, "Oh, well who else was out there?" And I named off a bunch of the male scientists that I had gone out with and she said, "Well, who were the other women?" And I said, "There weren't any other women." And she looked at me kind of funny and she said, "Who did you talk to?" And I'm afraid I was rather taken aback by that because with 200 men out there, who was I going to talk to? It seemed to me that there were a lot of people I could talk to.

BS: *It would be interesting because probably her life was all, she had no professional life. You know, she's married and . . .*

(550)
RH: Not as a scientist. I've forgotten. I think he was at a small college in South Dakota and I don't know whether she had a job in the town where they lived or not. I just don't remember.

BS: Well, the reason I say that is because I see a lot of scientists whose wives are absolutely, totally oblivious to what their work is. They don't understand it and they've given up trying.

RH: Yeah.

BS: And so they don't even participate in the conversations and if you get a bunch of scientists in a room, you see the . . . well, it's different now. But, in those days, they'd be in one corner and the wives would be in another.

RH: Yeah, yeah. No, she just couldn't believe that I had been out there with all those guys all by myself. And I guess, having been brought up sort of in this department when there weren't that many women here at that time, at least, it never occurred to me, and having gone out on the school oceanography's research vessel by myself as the only woman out there, it never occurred to me that this was something so strange and unusual. The battle to get on board, of course, was interesting, but again, here, women had been going out on the ship for years and years and years. And it just wasn't a big thing. If the ship was going out and at that time, the department was much, much smaller, of course, if they needed a body to do something, and you worked here, you might very well be sent out even if you weren't going to be doing the things that you normally did just because they needed a body. So, it just wasn't that major a problem as far as I was concerned.

(End of Tape 1 - Side A)
RH: That was the summer of 1973. And in the fall of 1974, I resigned my job at the University of Alaska, came down here, and got involved in this Outer Continental Shelf Environmental Assessment Program. And spent three years, at least, working on that project. And again, there were, as part of the project for the off shore, there were going to be cruises on Coast Guard icebreakers. And I told the logistics coordinator for the OCSEAP program to be sure and tell the Coast Guard that there would be women going on these cruises. And he did, and the word came back, "No women." Well, I had a female technician at the time. She just went ballistic, because of course, this was 1976, I guess, and this was about the time that there was all a hassle about _____ and all this kind of thing. And, again, she'd been working around here so she saw that women weren't treated any differently than the men, basically, and that if they needed to go to sea, they went to sea.

So, she started making phone calls. Finally, I said to her . . . she was calling the 13th Coast Guard district downtown here and finally I said to her, "Hang on. Just a minute. Let me make a phone call." And I called a man back in Washington who was with the Coast Guard and who did a lot of the detailing on icebreakers and planning and all that sort of thing and I had met him when I went out in '73 and I knew that he was still there. So, I talked to him. And he said, "Oh, are you the one who wants to go?" And I said, "Well, yes, I'm one of them and I have a female technician. I'm sure there will be others that want to go." And he said, "Well, tell the Fairbanks guys to send through their request again and there should be no problem." So, I called the Fairbanks guys and said "Put through your request again," and sure enough, there was no problem. So, I was very pleased about that because it meant that I had made a good impression when I was out.
BS: *What had changed things? I mean, that went all the way to the top.*

RH: Right. I don't know. Apparently the fact that I had already been out and I hadn't caused any trouble. I guess that helped. I don't really know. And what had already transpired, anyway, amongst the OCSEAP people was that I was appointed as the Chief Scientist on that cruise. This was something the Coast Guard didn't know quite yet. And there was . . .

BS: *OCSAP?*

RH: OCSEAP. O-C-S-E-A-P.

BS: *Oh, environmental assessment.*

(50)

RH: Yeah. So, as the Chief Scientist, I went down to Long Beach, California, where the icebreakers were then home ported. This was the *Glacier.* And to the planning meeting. And I went down with the logistics coordinator and I don't know, one or two other scientists, I guess. And we got to the meeting the first morning and the man who was the Executive Officer came over and he said, "Oh, I guess you're going to go out with us, aren't you?" And I said, "Yes." And he said, "Well, come over and meet the captain." So, I went over and met the captain who was extremely nice.

BS: *Who was it?*

RH: Oh, gosh.
BS: *Bruce Little?*

RH: No. Let me think about that for a bit. And so, we had our meeting and everything was fine and nobody complained about the fact that I was going to be on board. And as it turned out, I was the only woman again, because by then, my technician had quit. And there were . . . nobody else wanted to send a woman out. So, we got to Barrow to load and again, it was a matter of having to load by helicopter because the ice was too bad for small boats.

BS: *What time of year?*

RH: It must have been July. Late June, early July.

BS: *'76?*

RH: '76. And as soon as the helicopter landed on the ship, somebody came up to me and said, "Captain wants to see you in the cabin immediately." So, I went to the captain's cabin and he said, "We're a little short on space for scientists, so I'd like to offer you the spare room here in the captain's cabin." So, I ended up staying in the captain's cabin on that cruise which was very, very nice. Very pleasant. And that worked out - it worked out especially well for me because it meant that if there were any problems when I wasn't actually around and out on deck somewhere, everybody was too afraid to come up to the captain's cabin to disturb me.

BS: *Did you share meals with him in his cabin?*

RH: I did. Yes.

BS: *And he ate alone, usually.*
RH: Usually, yeah.

BS: That's the admiral's quarter.

RH: Um-hum. Yeah. And that cruise went very well.

BS: *I have to interject a question here. It's just a pregnant thing. Did the fact that he treated you with great dignity have . . . set the stage for better cooperation in the future after that?*

RH: Well, I don't know if it was that or what, but the next year . . .

BS: *Was he interested in your research?*

RH: He was, but his attitude was that so long as there were scientists on board, the ship was theirs so long as we didn't get the ship into any difficulty. And so long as he knew what was going on. And, you know, that's only fair. The Marine Science Officer was a young man right out of the Coast Guard Academy who didn't really know a whole lot about much of the science that we were doing, but did a very, very good job of helping us with the ______ whenever we needed help and all this kind of thing. And, so that was very good. The Executive Officer was also very good and interested in what we were doing and made sure that things worked out well.

BS: *Rita, can I back up a second right here because this overlaps the period that I was at Barrow.*

Dick Longee, no that's not it.

RH: Dick Lefevre?
BS: *No. I was thinking of the Skipper of the Glacier, because I flew out there to the ship when it was off shore. He was our Coast Guard officer in Deepfreeze in the ’60s. I knew him then when he was Commander of*. . .

(100)

RH: I can see his face, but I just can't put a name to it.

BS: *We'll think of it together. He would have been very, very cooperative.*

RH: Um-hum.

BS: *Did you get involved with AJAX at all? That basically was my question.*

RH: Well. Tom, because he and - Tom English - because he and Norbert Untersteiner were good buddies, Tom managed to talk Norbert into letting him put one biologist on AJAX. So, a graduate student named Clarence Potsky went to AJAX from Tom's project. And so that's the only way that we were really involved with that at all.

BS: *OK.*

RH: But, let's see. Things worked out very well on that cruise. The next year, we were on Glacier again. The Executive Officer had changed. The Marine Science Officer was still the same. And we had another Ops Officer, I think. At the end of that cruise, there was a big flap because the Ops Officer and somebody else had gone around through the science quarters and had discovered that there was some beer in the refrigerator. Beer, of course, was not allowed on
board. It was a dry ship at the time. And that caused a little bit of a flap. Well, it turned out that the scientist who had it had had it at Barrow and had taken it out with him and it had sat in the refrigerator during the whole cruise. They hadn't touched it. They'd forgotten it was there. It got behind something, and so once that was explained, then, you know, the flap died down. But, there had definitely been a bit of a problem.

I think it was in '78 that the *Burton Island* was also in the area and the *Burton Island* Captain invited the *Glacier* Captain and Exec and me as the Senior Scientist to dinner one night with the *Burton Island* Exec and Senior Scientist. And our ExO came to me before we went over and he said, "Now the *Burton Island* is not dry." And he said, "We'll probably be offered a drink before dinner and frankly, I intend to have it." I thought it was very nice of him to let me know ahead of time what I might expect and it was OK if I drank on the *Burton Island*. Just so I didn't do it on the *Glacier*.

BS: *Did the Coast Guard change their policy? The Navy hasn't.*

RH: It's the Captain's pleasure. And it's a matter of whether you get two beers on Saturday night, I think. The Captain can either have a dry ship, if he prefers, or he can have carefully dispersed beer. They used to have a big party on the beach at Barrow when the ship came in there, and I'm sure as the former director of the lab, you probably found out about a lot of those.

BS: *I went to them.*

RH: You went to them. And how a number of people were carried back to ship in cargo nets and things and reloaded back on the ship in cargo nets.

BS: *That's how the Navy does it too. There was discussion for years as to whether we should go wet because the guys go nuts when they go into Hong Kong and tear the town apart. It was*
getting embarrassing. It's getting tolerated less and less. Ports that used to be . . . you know, Hong Kong was a poor place at one time and they're happy to have the Navy no matter what they did because they brought money, but now, they don't even care.

RH: Yeah. But that was a very nice evening.

(150)

BS: Now, you're work on the Glacier, and during this period of time for the OCSEAP was similar? You were still doing . . . ?

RH: Yeah, still doing . . . it was mostly phytoplankton, so not the ice algae anymore. It was primary productivity and biomass chlorophyll.

BS: What do you mean by primary productivity?

RH: The phytoplanktons carry on photosynthesis and produce carbon and this is the primary production or provides the food, basically, for all of the other animals in the ocean, in the trophic system. So the small animals eat the phytoplankton and, in turn, are eaten by bigger animals and so on.

BS: So that's called primary productivity.

RH: That's primary productivity. The zooplankton and all the other things, basically, are secondary production.
BS: The zooplankton, you mentioned . . . there's a question in my mind where zooplankton leave off and the non-plankton begin. Is there a size or . . . ?

RH: Yeah. It's pretty much a size thing.

BS: A size thing. I mean the difference between a krill and a lobster is size.

RH: Yeah. Except lobster aren't really plankton. They're ___lek.

BS: I see. You mean they're on the bottom.

RH: On the bottom. Right.

BS: Plankton float.

RH: Plankton float. Yes. And so fish, for example, would be called nekton, because they can actually swim and move against currents whereas most of the - except for some of the really big zooplanckton - they can't really make much headway against a really good current. But this was . . . my work was all a part of the big, overall project so that there were people doing - I was actually collecting zooplanckton at the same time and I had somebody down here who was analyzing those samples as well. But, there were people doing ____ invertebrates. There was a fellow from Oregon State that, if you gave him a big muddy, muddy box for a sample, he would be out on deck just having himself a ball. He would be mud up one side and down the other. But, he was having the greatest fun and he would just be out there digging away and plowing through this stuff and I remember walking up to him one day, and he said, "Hold out your hand." And I held out my hand, and he handed me this great hunk of mud and it wiggled and I said, "What is this?" And he said, "Oh, well that's a big such-and-such." And I said, "Wonderful." And he said,
"Just hang on to it. We really have to have that." But, he just had the best time out there playing around in the mud. So, there were ____ people. There were people from Alaska Fish and Game looking at the field, primarily. Who else was there? There was a person who was looking at sediment. A fellow geologist from the University of Alaska. Anyway, it was quite a well rounded . . . .

BS: *Was this paid for through the oil companies or by the oil companies?*

RH: It was what's now called the Mineral Management Service. Bureau of Land Management. And I don't know whether they got money from the oil companies as well or not. But, it was primarily BLM that was sponsoring this project.

(200)

BS: *A lot of scientists.*

RH: Yes. There were a lot of scientists. Because not only were there people doing water type studies, but there were also people doing tundra work. And so there were a number of people that . . . there were a lot of people working on this project. One of the interesting things about the project is that most of the people who were working - most of the scientists had never been in Alaska or certainly to Barrow in the winter time. And, in fact, I think I might have been the only one who had actually been there for long periods during the winter. And so the Head of the Project, Gunter Weller from the University of Alaska, decided that the synthesis meeting should be at Barrow in January and this caused a lot of trouble because people didn't want to be in Barrow in January. It was cold and dark up there then.

BS: *Which year was that?*
RH: Probably somewhere - I think, well we had a couple of synthesis meetings in '77 and '78, I think, and they were in Barrow. And one of them, I remember, was on the day that the sun first came back because all of the locals were standing at the windows watching to see the sun come up at noon. And everybody - all the scientists - were looking at them kind of funny like, why are you standing there just looking out like that?

BS: *No sun for two months.*

RH: Yeah. Exactly. But, even people who were administering the Gulf of Alaska part of the project or the Bering Sea part of the project and who lived in Alaska, people from Juneau, had never been to Barrow in the winter time. And were quite surprised at what it was like up there. That project, let's see, I stayed on the Beaufort Sea part of it . . . well, let's see, in the summer of '79, there was another cruise and that was going to be on the *Northwind* which was a smaller icebreaker and didn't have the same sort of facilities that the *Glacier* had. In other words, there really wasn't a berthing area for scientists. The scientist were just kind of mixed in with the crew. And I went to the planning meeting. It was back in Maryland. And nothing much was said until finally I decided I'd better say something to make sure - this was a new captain and to make sure that it was going to be OK for women to be on board and I asked if that was going to be all right. If that was going to be a problem knowing that the ship was different and he asked me if I was going to be one of the women and I said, "Yes." And he said, "Well, then if you will vouch for them, there will be no problem." Well, there was a woman from the microbiology group at Oregon State who came out and the two of us were put in the infirmary. This was not the most pleasant place to be. We did have our own head, but it was inconvenient in that we basically couldn't go into the room during the day except at noon because there were always sick calls and things of that sort. So, we were sort of out from the time we left at 8 in the morning until 4:30 in the afternoon or something like that except if we needed to run in during noon.
It also turned out that this young lady was spending a lot of time with one of the officers and was not spending a lot of time in our own room and this caused some problem because the officer that was being displaced from his room was the Marine Science Officer. And, it finally reached the point where I just said, "OK, you're out of here." And she was put ashore, I think, at Prudhoe Bay. No, about that time, the ship experienced mechanical problems and the cruise ended early. So, when we got back to Barrow, by the time I found out about it, it was only going to be about a day or so and so she was definitely put ashore at Barrow. And the rest of us were given the opportunity to stay on board down to Kodiak which is where the ship was headed. And that worked out very well. It was my first opportunity to see the Bering Sea and everybody had said that it was such a rough, miserable, nasty place. Well, it turned out that the sun was out and we had a bit of a (fallowing) sea and it wasn't rough and it was really a nice pleasant trip. And then we off-loaded all of our gear at Kodiak and flew home from there.

BS: *So the ships you've been on are the Northwind, Glacier, Burton Island.*

RH: Well, the *Burton Island* I was only on for dinner. So then, in, it must have been about '79 or so, I started working on the Bering Sea part of the OCSEAP program. And ended up spending two months on the *Polar Sea* and the *Bering Sea* and again, I was the Chief Scientist.

BS: *What ship?*

RH: *The Polar Sea.*

BS: *The Polar Sea.*
RH: I'm trying to remember that it was in '80 that we were out for two months or whether it was '81.

BS: *Doesn't matter.*

RH: Well, I guess in '80 we were only out for a month, because that was when Mount St. Helen's blew and we were at sea at the time. We were out in May, and early June, and then . . . yeah, and then I guess it was '81 that we were out for two months at about the same time. And that basically ended my cruising with the Coast Guard. In '81, we were on the *Polar Star.* So, I've been on the *Northwind,* the *Glacier,* the *Polar Sea* and the *Polar Star* for cruises. By '80, there were no questions as to whether women could go or not. And certainly the polar class had almost individual state rooms so that it was really quite easy.

(300)

I think in '80, there were - I think both years, maybe, there were 4 of us. Four women on board. And with one exception, there really were never any serious problems.

BS: *OK. So you ended your cruising in the Bering Sea.*

RH: Right. And that also, basically, ended most of my Arctic research.

BS: *That was about 1981. You mentioned you'd been to the Antarctic.*

RH: I can't remember which year, but I was here and I had started working on harmful algobloom - the things that the phytoplankton that make toxins that get into the food chain and
work their way up the food chain and cause very serious problems to humans. What you hear the
most about is paralytic shellfish poisoning and everybody calls this "red tide." Well, red tide's
not a good word for that and I'm not going to get into that. My office mate at the time was a
woman named Kendra Daley and she had been doing a lot of Antarctic work, especially acoustic
assessment of krill and this was kind of left over from some of Tom English's work. He had done
acoustic assessments of a number of organisms, both here in Puget Sound and up in the Gulf of
Alaska as part of the OCSEAP program. And so Kendra was working with a fellow named Mike
Macauley and they had gone to the Antarctic several times on Canolar cruises and unfortunately,
I can't tell you what Canolar means.

BS:  *Convention on Conservation of Antarctic Marine Living Resources.* (N.B. - and the
acronym is . . . ?)

RH:  All right. And Kendra had decided that she was going to leave the department and go do
something else, so the cruise that she was supposed to go on then, she asked me if I wanted to
go. So I said, sure. Well, as luck would have it, her other position fell through and so then she
was going to go on it. And that was OK. In the meantime, I had put a little bit of stuff on board
the ship. It was a NOAA ship - the *Surveyor* that sailed out of Seattle. And I had already put, oh I
don't know, some boots and a little bit of heavy gear or something like that because the cruise
itself was going to be in February and the ship left here in October. Well, that was OK when she
decided she was going to go because I really didn't have that much stuff on board and if it was
clothing, she could use it anyway. So, that was OK.

BS:  *So this was which year now?*

RH:  You know, I can't remember. This was sometime, maybe '86. I don't know. I just can't
remember. No, it was before that. '83, maybe. I don't know. I can't remember.
So, she was going on the cruise and all was well and ten days before she was scheduled to leave, I was in the throes of finishing up two proposals and I’ve forgotten, a bunch of other stuff, and the phone rang one morning - this was in probably early February, and this very weak little voice said, "Rita, this is Kendra. Do you still want to go to the Antarctic?" And I said, "Well, yes, but why aren't you going?" And she said, "I got thrown off my horse last night and I broke my pelvis in two places. And so somebody has to go in place of me." And I said, "Well, OK, yeah, I guess I can go." But, there were some problems that had to be worked out because she needed her salary because she needed her medical benefits, of course, at that point. And I needed some salary and also medical benefits, because otherwise it was going to be a little bit dangerous for me to go on this cruise. So, finally the department agreed they would pay my salary half time, which meant that I would get benefits, and she got her salary out of her research grant, so she had benefits. So we finally got this all squared away. I got my proposal finished. And there was a lot of communication with the Canolar people in San Diego who were running the show from the NOAA Southwest Fishery Center, and I flew off to Santiago and Punta Arenas and joined the ship. Somebody else from here also went down, but she went several days early because she wanted to spend some time in Santiago, I guess.

We got to the ship, or I got to the ship, and a lot of people, including the woman I was supposed to be working with were sick. They had some sort of respiratory problems, and that was not very good for anybody. For some reason, I was berthed with a woman who was a member of the ship's crew - a steward - and that worked out fine because it turned out that we had this great huge, basically four person room for only the two of us and it was with the people who were the cooks and so they all got up very, very early and that meant that I had the head all to myself whenever I wanted to go and it worked out just fine as far as I was concerned. I really enjoyed that part of it. And also the Surveyor had lots of fresh water, so that was good. But
basically, I didn't really have very much to do. I was there just as a warm body and once we got
down in the area down around Elephant Island, we were doing acoustic surveys and I had the 12
hour day shift and the other person had the 12 hour night shift.

(400)

BS: *You were listening to krill?*

RH: We were trying to find krill. And so when we'd come on station, literally all I had to do was
go out and plug in a sonic system that somebody else would then lower over the side and then
when it came back up, I'd have to unplug it. And so, literally, I was there just because I was
breathing. I mean I did just really nothing.

BS: *Where all did you cruise?*

RH: We were just right around Elephant Island. We also did some resupply on Seal Island to a
bunch of mammal people from out here at Sand Point - the NOAA Sand Point Mammal group.
And then at the end of the month of cruising, why, we picked them up and came back. And let's
see, one day we did have an R-and-R day where we went to Discovery Island and could get off
the ship and go in and around in the crater of Discovery Island. So that was kind of fun.

BS: *Deception.*

RH: Deception Island, sorry. Yeah, Deception Island.

BS: *I say that. I go there maybe ten times a year.*
RH: Oh, OK. Deception Island. The only problem with it was, of course, that was one of the days when the weather was not very good and . . .

BS: *Getting in and out of that channel at times, the cruise ships stay in there because it gets pretty rough. Well, first of all they like to take care of the passengers, but it's dangerous going through there.*

RH: Yeah, we had gone in and then the wind came up a little bit, but then it also started to snow. And by the time we got back, there were a bunch of really cold people. But we got our chance to go out and look around anyway.

BS: Use Zodiaks? Or ______ boats?

RH: Zodiaks, I think.

BS: I drive 'em. That's my vacation . . . I get out of the rain in Oregon.

RH: Ohhh, no thanks. On the way back, the ship came up Beagle Channel and so that was a very, very nice chance to . . .

BS: Get off at Ushuaia?

RH: No.

BS: Punta Arenas?

RH: Punta Arenas.
BS:  *Ushuaia is the place now.*

RH:  Is it?

BS:  *The cruise liners come in and they've got this pier going out to the bay, or sort of a bay on the side of a big channel. And it's changed the tour industry. There's probably 200 good restaurants there.*

(450)

RH:  We came back into Punta Arenas and let's see, there was a ship there from Lamont and the, what was the Antarctic NSF ship before the *Palmer*?

BS:  *The Hero?*

RH:  I guess it was the *Hero*.

BS:  *Yeah. We had the Hero and we had the Polar Duke.*

RH:  *Polar Duke*, were both in, so there were three research vessels in all at the same time. And all swapping scientists and crew and such. And I guess I left the next day and flew back up to Santiago and I did a flight straight through. I didn't have to stay over in Santiago on the way back. It was a straight through flight. And back, and there were some marine mammal people who were coming back on the same flight, I think, as I recall. But, that was my one and only trip to the Antarctic.
BS: *And that, basically, ended your polar work.*

RH: That basically ended my polar work. Yeah.

BS: *What have you been doing since? That was about what? 1983? '84? '85?*

RH: Something like that, yeah. Since then, I've been working primarily in Puget Sound or in the Pacific Northwest and I've gotten involved in this harmful algobloom business and trying to find out more about the biology of the (organisms) that cause these blooms. There was a man over in the School of Fisheries who headed up a program on this for a long time and the ex-wife of my Master's and Ph.D. professor was on the program and when she decided to retire, she was trying to find somebody else who could sort of take over and so somebody else here and I said, well, OK, we'd write a bunch of proposals. This was in the late '80s and we never got anything funded, but finally, we got Sea Grant money. So we got money from Sea Grant, too, to work on it. So that worked out quite well. At that time, we were working with fish growers, local fish farmers here because there are a couple of organisms that kill fish primarily in net pens.

BS: *What kind of fish?*

(500)

RH: The salmonis that are grown, well, mostly Atlantic salmon. And so we were working on one of those organisms originally, and then the bloom of the second one. And then we started working on that one as well. And then got some money from a NOAA program called ____ ____ Kennedy. These are grants that the fishing industry pays taxes to the government and then if Congress so desires, they can essentially give back some of that money as research grants. And the Pacific Northwest is one of the areas that has these grants. And so, two of us here, then, did
about five years of almost every other week, monitoring. We had five sites in Puget Sound and Hood Canal and five sites out on the coast. And so we've got a lot of local data now that we're still trying to get worked up.

BS: *It's a pretty complex thing, isn't it?*

RH: Yeah. It is. It is.

BS: *Tell me, looking back in retrospect, polar work. Would you have changed anything? Would you have done it again?*

RH: Yeah, I think I would have.

BS: *Pretty exciting?*

RH: I really, really enjoyed working up there.

BS: *Did you enjoy being the first woman in so many cases?*

RH: Well, I guess I have to say yes, but I don't think it would have mattered.

BS: *Your work was your work.*

RH: The work was the work. It was nice . . .

BS: *It wasn't a goal. You didn't push the "I'm a woman and I can do this."*
RH: No, no, no, no, no.

BS: I'm a body and I came to do the work.

RH: Right. And I guess I didn't . . . I pushed it because I wanted to do the work, but it was because here, it didn't matter if you were a woman or not. You still went on the ship or whatever. Also, it turned out that Tom English's group had been the pioneers here in letting women go out and stay overnight on the small boats at that time. The department had two, oh about 65-footers that would sleep, I don't know, four. But, all in the same room. And so it was his group that kind of pushed. It was more Tom pushing to get this sort of thing than the women who were actually doing the project. The women didn't care.

(550)

BS: So, really, you went out before these women's groups said, "How many women you got?"

RH: Yeah.

BS: It was before this movement, counting noses.

RH: That sort of counting noses doesn't sit very well with me. I think you should be allowed to go places to do your work on your own merits rather than whether you're a woman or whether you're green or whatever. That it's your work that should be what shows through. And so, yes, it was nice and it was fun to be able to say that I was the first. But, that wasn't the reason why I was doing it. And it's interesting because I don't think most of the people here in this department now realize, and there are a number of women on this floor who go out on icebreakers now. I don't
think any of them knows that I was the first woman to go out. Most of them don't even realize that I did a lot of the pioneering work on sea ice, on sea ice biology, which I find rather amusing.

BS: *They just take it for granted.*

RH: They just take it for granted that they can go and do what. . . yeah. And we have a lot of female graduate students now. A lot of female graduate students. It's probably pretty close to 50-50, is my guess. One of the other things that I got to do was, in the early 1980s, I was asked by CRC Press in Florida to edit a book on sea ice ecology. And so that book came out in 1985, and it's still frequently cited in the literature or papers from it are frequently cited in the literature. Probably the best chapter in the whole book was the one that Gary Macutt wrote on the ice environment.

(600)

BS: *You edited it.*

RH: I edited it, yeah.

BS: *Do you have plans for archiving any of your work or do you have a place that you're going to put them. Does the University handle that here?*

RH: The OCSEAP data all had to be submitted to NODC - the National Oceanographic Data . . .

(End of Tape 1 - Side B)
BS: This is Tape 2A of the Rita Horner interview in her office at the University of Washington on the 18th of August, 2000. Dr. Horner.

RH: OK. Forgot a couple of things. While I hadn't done any real research in the Arctic for quite a long time, in 1989, I was asked to be a member of the SCOR working group on sea ice ecology and the other members of the group - it originally was headed by Neil Sullivan, Steve Ackley is the other American who was on and who took over as the Chairman of the group, and then the other people were from Germany, Russia, Norway and Canada.

BS: What does SCOR mean?

RH: Scientific Committee on Oceanographic Research. And that group met a number of times and planned the Gordon Research Conference that was held in the Spring of 1996, I think, in Ventura, California. And at that time, it brought together anybody who was interested in polar science. It was called the Gordon Research Conference on Polar Marine Science. But, that SCOR committee, basically, ended at the time of that conference.

BS: So, it was on polar marine science?

RH: Polar marine science, yeah.

BS: It wasn't just Antarctic.
RH: No, no, no.

BS: *What did the conference do?*

RH: Well, it's . . . Gordon Conferences are a little bit different from most scientific meetings in that . . .

BS: *They're called Gordon . . .?*

RH: Gordon, G-o-r-d-o-n. And they're run by a foundation in the _____ at the University of Rhode Island.

BS: *It's called the Gordon . . .*

RH: Gordon Research Conference. And there are, well, in the *Journal of Science*, usually in the Spring, you'll see a program for all of the Gordon Research Conferences that are going to be held and they're held on a number of different topics. But, the idea is that there are usually invited speakers in the morning and in the evening. And afternoons are free to do whatever you like. Talk to people or whatever. And the talks and such are never published or at least they're not published as proceedings at the meetings. They are basically . . . nothing really official comes out of the meetings. But it does give you a chance to see people that you might not see very often. Hear what they've been doing and these conferences are really sort of major conferences in the scientific world and it's not just polar science. It's any kind of science. There are a lot of chemical groups, for example, that get together at these.

BS: *Why Gordon? Put up the money?*
RH: I don't know. I think so, yeah.

BS: ________. Very interesting. I've never heard of them. So, these countries that are there were Russia, Norway, United States . . .

RH: Canada.

BS: Denmark?


BS: Do you still go to those?

RH: No, the committee essentially disbanded as of that Gordon Research Conference.

BS: So you are consulted on polar stuff?

RH: Yeah. And I'm actually one of the editors of the *Journal of Polar Biology*.

BS: Oh, you are.

RH: Yeah. It comes out of . . . well, the managing editor is _____ Hempel in Germany. I guess he decided that I'd reviewed so many papers for him, he'd make me do some real work.

BS: I'm the editor of the *Polar Times*. So you're Assistant Editor?
RH: Well, I wouldn't . . . I'm on the board of editors, whatever that is. I guess it's not really an assistant editor, but I think the title is editor, but I'm not really a . . . I don't do all the decisions in terms of papers.

BS: That's the easy part. Trying to make it, get it succinct. That's how I learned more about writing when I got out of the Navy. I learned how to use computers for publishing _____ Adobe, photographic reproduction. How many BPI that you can transfer on an e-mail that is reproducible on a printed page. A lot of it isn't. If you blow it up, or _____, it gets fuzzy. It can only be a picture that big. It's all you can do because you need to make it efficient. You cut a piece out. If its got enough dots, it won't get fuzzy.

RH: Also, at that Gordon Conference, Willy Weeks and I were given the Chairman's Award for our work in Polar Science. So, I was rather honored - one to be in the same class as Willy Weeks, and two, just to be honored for what I had done. I didn't think it was all that great.

BS: Have you seen Willy?

RH: No.

(End of Tape 2 - Side A)

END OF INTERVIEW