

Dr. Eugene La Fond
San Diego, CA

Brian Shoemaker
27 February 2000

(Begin Tape 1 - Side A)

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BS: This is an oral history interview with Dr. Eugene La Fond taken at his home in San Diego, California, on 27 February 2000. The interview is part of the Polar Oral History Program at the American Polar Society in the Byrd Polar Archives Program of the Ohio State University on a grant from the National Science Foundation. You're on.

EL: My grandfather was a French-Canadian. He was born in Wisconsin, but his father was born in Quebec, Canada. He was a fisherman in Lake Michigan. He would make his own boats - 28 feet long, two masted, and sail out of Two Rivers, Wisconsin. Set the nets, and then come back and - these were gill nets - and he'd bring in the fish. It was pretty rough in the winter time, lots of ice, so he was used to cold weather. But, he learned from the newspaper that gold had been discovered in Alaska. In 1898, he and two of his cousins collected all the money that they could from their neighbors and friends and relatives - practically everybody in Two Rivers, Wisconsin, were relatives - and took a train to San Francisco. There, they bought supplies, especially barrels of salt pork and they engaged a boat to take them to Alaska. How they figured this out, I don't know, but they decided to go up the river, instead of down the Yukon like most of the Alaskan miners at that time. When they left, two men came to the captain of the boat and said, "We are

tailors. We'd like to work our way to Alaska." The captain said, "I can use two sailors." They were Swedish and their accent was difficult to understand. Anyway, this is what was called *The Alaskan*. About 125 feet long, about 800 ton, I believe.

Well, as soon as they left San Francisco, a storm occurred and tore the sails and almost swamped the boat. And the captain soon discovered that the sailors were really tailors. They came at a bad time. It was overcast most of the way up to the Aleutian Islands, but just before they got to the Aleutian Islands, the sun came out and they got their position. They sailed up to Kotzebue Sound. There must have been a village there. They were put ashore with their supplies. The two Swedish tailors jumped ship and started out on their own, but they came back in a couple of days and said it was too rough for them. Well, they wouldn't take them back, but they gave them some supplies and they went on, and supposedly discovered gold near Nome, Alaska.

(50)

My grandfather, and his two cousins, built a house for the winter from driftwood and stuff they could chop down and they took the lumber and logs that came down the Kobuk River. Why they went to Kobuk River, I don't know, instead of the Yukon. And they rip sawed these logs, made lumber, and built a boat. So that when the ice broke loose the next year, 1899, they took this boat and went up the Kobuk River, they say for 300 miles. That seems too large a figure. But they didn't find any gold. But they had a hard time getting up the river because there were rapids, waterfalls, but the boat held up and so did they. And they decided that when they heard about there was gold at Nome, they took the boat and sailed it down through the Bering Straits. This was rather spectacular because the current, when I measured it, was between 2-4 knots going to the north through the Straits. They would have to buck that current.

And they sailed down to Nome, and for a while they worked for a miner, but they soon decided that there's enough gold in the sand on the beach to make it worthwhile. They made a, what they called a "rocker," which they put in a shovel full of sand and a bucket of water and

made this thing rock and the gold would collect in the little ridges. Well, they took . . . one day, they said, \$400 . . . all told, something like \$3000. And the Coast Guard came in there and said, "You either stay over the next winter here, or we'll take you out now." That was quite a decision. But, they'd had enough. They came back to Wisconsin.

BS: *Which ship did they come out on?*

EL: I don't know which ship that was. It was one of the Coast Guard's.

BS: *Was it the Bear?*

EL: I don't know. He didn't say. They wrote a little pamphlet, our friends of my father's. His name was Barry. My grandfather, . . . his name was Godfrey La Fond. They wrote it, these friends of his, for the San Diego 1935 Exposition, and sold it at the Fair. It was called, "The Story of Gold," in which he recalls his experiences in Alaska. So, this is my main source of information.

BS: *Your grandfather was an inspiration to you, I take it.*

(100)

EL: Well, he was an adventurous person, and I always wanted to see his house and quarters and boat, and so on, that he built with his cousins at Kotzebue. That's one reason for going to Alaska. My father . . . well, the family moved to the state of Washington, Puget Sound. They thought they were going to pick up fishing there, but it was pretty commercialized by then and a single person with a small boat did not have much chance competing with them. But they did work on the fish traps in Puget Sound to trap salmon for other people. My father got tired of that and went

up to Vancouver, Canada, saw a new ship there called "The Empress of India," and he went aboard. They said they only hired Canadians, and he said, "Well, I was born in Quebec," so he went aboard as a sailor and the ship went to Japan and China.

After moving to Puget Sound, Birch Bay, they moved to eastern Washington to raise wheat. This had proved to be a very profitable occupation and they had several other attempts at different locations. But eventually, they moved to Oakland and my father worked on the ferry-boats as a deck hand and then as a second officer, from Berkeley and Santa Clara and so forth. They ran from Oakland to San Francisco every 20 minutes.

My grandfather worked in the shipyards during the war and afterwards he wanted to raise chickens. It seemed like that would be a good vocation, so they came down to San Diego and bought 10 acres at Imperial Beach. There was a house. The people that lived there, the wife and the family died, and her husband sold the place to my parents. They built some chicken coops and bought some chickens. My father went back to San Francisco, to Oakland, to work on the ferry boats, but the chicken raising didn't pay very well. So we finally had to come back again to Imperial Beach and give up his ferry boat work.

(150)

And I was raised in Imperial Beach. I was born in eastern Washington, and lived in Oregon, Oakland, Imperial Beach. I enjoyed the ocean very much. I'd collect shells, seaweed. Went to San Diego schools, and after graduating from San Diego State, I went to Scripps and applied for a job - Scripps Institution of Oceanography.

BS: *Which year was that?*

EL: 1933. Went to work September the 11th, I think. My wife was a chemist. I majored in chemistry. And she volunteered at the San Diego Zoo Hospital where they operated on animals

and she went to Scripps to get some information on making thin sections and while there, a job opened up to run salinity on sea water collected in the Bay of Panama.

BS: *Now this is for your wife or for you?*

EL: This is my wife.

BS: *OK. Now what's your wife's name?*

EL: Katherine, with a K. Her last name was Gehring. We had met at San Diego State College and had been going together for a while. She suggested I come out to Scripps and apply for employment which I did and they said, "There's no opening nor any money. Other than that, it's fine." I said, "Well, if there's no money, I'll work for nothing," which I did. They had some drafting they needed done, and I plotted the temperature versus salinity. There were Carnegie Stations throughout the Pacific Ocean.

BS: *This is data that came into Scripps?*

EL: Yes. They didn't collect it themselves . . . well, they did part of it. Dr. Moberg, Eric Moberg was aboard the *Carnegie* for one leg of the cruise, but most of the data were collected by others. I made myself useful around Scripps and finally they found some money.

(200)

Money came from forecasting the rainfall for the San Diego Gas and Electric Company for the next year so they could order the amount of fuel necessary to make their electricity and had some

idea of how much they'll need. If it's a cold winter, they need more fuel. I did all kinds of jobs. I rowed a boat to survey Scripps Canyon.

BS: *Was Roger Revelle there then?*

EL: Roger Revelle was there. He'd been there a short period of time. They had a new building, I think only two or three years old.

BS: *Who was the Head of Scripps at the time?*

EL: At the time, the Director was Dr. T. Wayland Vaughan. The Assistant Director was Eric Moberg. There were about 20 people working there at the time. I took up photography and did all of their photography, and I mentioned already drafting, and computing, but I did learn a great deal of oceanography. I took classes from the different professors there, but it was apparent that to go on for a Ph.D., I would need some additional work, oceanographic studies. So, I went to Berkeley, University of California, along with my wife, Katherine, whom I'd been married to for about a year, but secretly, because two people could not work at Scripps at the University of California from the same family.

BS: *When were you married?*

EL: I was married September the 4th, 1935.

BS: *And where were you married?*

EL: We took our vacations at the same time, drove back to Steamboat Springs, Colorado, where we had some friends. When we came back, we lived separately for a year. And after a year, we went to Berkeley for a year.

(250)

At that time, Dr. Vaughan, the Director, had retired and a new Director, Harald Sverdrup, a Norwegian, became Director.

BS: *Was this the Sverdrup of Sverdrup, Johnson and Fleming book?*

EL: Yes. And when we came back from Berkeley, they decided to write a book called, "The Oceans," by Sverdrup, Johnson and Fleming. I was recruited to make the figures for the book. Just before the book was finished, the War had started, and Pearl Harbor was bombed. But I had made many cruises on the *Scripps*, which was a fishing vessel converted to an oceanographic vessel and it had a fire and burned. And they got another sailing vessel called the "*E.W. Scripps*" which was about 100 feet long, two masted, a laboratory installed and I made many cruises on that vessel. In fact, I made more Nansen bottle casts for oceanographic stations than anybody in the world at that time.

And when the War came, part of Scripps moved to Point Loma, at a place called the Radio and Sound Laboratory on the crest of Point Loma, fairly well out on the point. This became the University of California Division of War Research. My job, eventually, was to collect all the bathythermograph observations in the Pacific and Indian Ocean which were taken on destroyers and other Navy ships and compute the range, the acoustic range, sonar range. Plot this on charts of the Pacific and Indian Ocean and prepare sonar charts giving the range, the expected range, at that particular location, for summer and winter.

(300)

Subsequent hydrographic charts include the other months. And these were published by the Hydrographic Office and issued to the Fleet. When the War came to an end, we had a large collection of data that they decided to take back to Scripps for analysis, so a group of about six technicians and myself were transferred from Point Loma back to Scripps. We started analyzing this immense quantity of temperature and depth data. About that time, at Point Loma, most of the people who had worked through the War went back to their former jobs. But, then they decided that oceanography was good for the newly established Navy Electronics Laboratory and Dr. Waldo Lyon invited me to come back from Scripps to the Navy Electronics Laboratory and head what they called the Structures Section which was the structures of the ocean, which wasn't a very appropriate title, but anyway . . . We had a wrenching decision, to give up a good solid employment with the University of California, or go back and work for the Navy at NEL. Waldo Lyon was not particularly persuasive, but he was a kind, honest, friendly person and we decided to go with him. He had headed acoustics division, I think it was, under which was the structures section, so I essentially was working for Waldo Lyon, but he never told me what to do.

(350)

All the years I worked for him, I made up my own program, proceeded without any instruction. Waldo was also interested in the Arctic and the Antarctic. But, before any of that kind of work came up, we had Bikini Atoll atomic bomb tests and there weren't very many oceanographers at that time and they wanted somebody out there who could determine where the radioactive water would go after the bomb tests.

First we had a small Navy. . . I think it was a tug with a winch and a bunch of water bottles. People from Wood's Hole also participated. But later I was given a destroyer to work around the atoll to take Nansen casts and BT observations to get the water structure, from which

you could calculate the dynamic height and the flow. This worked out quite well. But, during the actual explosions, I was transferred to the *Haven* - the hospital ship. There was one detonation under water and one in the air. These were unbelievable things. We were 20 miles away, but we could see the details. One of the things that I was supposed to do was to find out how fast water went up. I had collected a lot of shells, sea shells, tridacks, from the lagoon. I had under water face plates and fins, which were relatively new then.

(400)

BS: *Now this was before the blast?*

EL: Yes. Before the blast. And I wanted to save the shells. I couldn't very well bring these live mollusks on the ship, so I stored them on the atoll. But I was afraid that the blast would cause a wave and wash over the atoll and ruin my specimens. Waldo Lyon assured me that the waves would not be that high. I don't know why they weren't, but they weren't. He was correct. Right after the blast, I was the first one to go into the atoll when it was still hot. I collected water at different areas and different depths to find out where the maximum radioactivity was. This seems foolhardy now because the radioactivity is not good for people. One of my friends, John Lyman, was one of the group of oceanographers out there. He apparently got too much radioactivity and died. Well, after the blasts were over, I accompanied a destroyer back to San Diego, writing up the report en route. Most of the others flew back right away. But, Dean Bumpus and I . . . Dean Bumpus was from Wood's Hole, and I wrote a report of our activities during the tests en route to San Diego.

(450)

When I returned to San Diego, I set up the Structures Section at the Navy Electronics Laboratory. There were a few people left over from the group who were there during the War, but mostly we recruited new people. Bob Dietz, Bob Dill, Bill Menard, Al Carsola, Don Pritchard, Ted Saur, Ernie Anderson, Ed Hamilton, Ed Buffington and others, were recruited and we had a pretty good size unit. First we were concerned about the properties of the water, the sediment, and its effect on sonar ranging. But being under Waldo Lyon, and he was interested in the Arctic, so he told me that there was a possibility of doing some Arctic work from the USS *Nereus* - a 30,000 ton submarine tender. It's home base was in San Diego. It seemed to me that this would be an appropriate program for the oceanographic group.

BS: *Which year was this?*

EL: 1947.

BS: *Was this before Waldo? Waldo went south on the USS Sennet [a diesel submarine] to Antarctica?*

(500)

EL: I don't know. I don't know when he went to Antarctica.

BS: *I think that was '46, actually. It was High Jump.*

EL: Yeah. Well, we had opportunity to accompany the supply ships going to Antarctica and on one ship we put a bathythermograph, and Dr. Bob Dietz. We made a detailed section of temperature versus depth across the Antarctic convergence for the first time.

BS: *So you did a whole series of bathythermograph measurements across the convergence?*

EL: Yes.

BS: *Which ocean? South Pacific? South Atlantic?*

EL: I think it was the South Pacific. I've written it up. Well, getting back to the *Nereus*, it was based in San Diego, so we could put our equipment aboard. First we developed some kind of a program and then it went out to Pearl Harbor and then went up to Adak Island. Most of us flew out to the Hawaiian Islands and boarded it there. Running between the Hawaiian Islands and Adak, we dropped some explosives supposedly in the sound channel for a program called "SOFAR," in which the sound would become trapped in a subsurface layer by the warmer temperatures at the top and the pressure of the water below this channel.

(550)

I was given a case of dynamite and some detonators and at 6 o'clock I was supposed to drop a couple of these bombs. And they would be listening at Point Sur, California, to hear. As you go north the top of the Sound Channel becomes weaker and weaker. It completely disappears.

BS: *You didn't know that at the time, did you?*

EL: We didn't know how far. The trouble is, I wasn't much of a munitions expert, so I had the detonators and dynamite. I got up in the morning at 5 o'clock to wrap these charges up. The gunnery officer on the *Nereus* did not appreciate this at all. So, he wrote a letter to the captain and said he would not be responsible if I blew up the ship. Fortunately, the captain was an understanding man who said I could continue on blasting away. And we also stopped at Pribilof

Islands to see the seals. We were going to make a survey of the approaches to the island, but it didn't materialize. But, we occupied a series of bathythermograph stations. . .

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((Begin Tape 1 - Side B)

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EL: This is an insert under Bikini Atoll operations. We were given two destroyers and we went down and spaced them 10 degrees apart. Ran a line of stations from 20 North to 5 South, every degree. John Lyman was on one destroyer and I was on the other. He radioed me that he was getting a large wire angle when he put the Nansen bottles down. Up to 70 degrees from the vertical. And I wired back that I was getting 68 myself. This was on the 0 degree North latitude. The fact that the wire wouldn't go straight down said there was a subsurface current. We didn't recognize it at the time, but later it was discovered that there is an undercurrent at the equator. We had the first evidence of it, but we didn't recognize it as such.

Now getting back to the *Nereus*, also leaving from Honolulu, four submarines joined our task force.

BS: *What were their names?*

EL: I don't know. Also on board was Admiral John McCain, who was in charge of the submarines. In fact, he was in charge of all the Pacific Fleet. He had his own quarters on the

Nereus, and he invited me to dinner to eat in his private quarters one meal. Well, now from the Pribilofs north, we stopped this big ship and I guess the submarines stopped too. And we occupied a station every so often. The ship built an A-frame on the fan tail. This was a big ship and we were about 20 feet away from the water surface. We took BT Nansen casts, bottom samples, plankton net hauls and weather for a straight line of stations. Also had a continuous depth across the Bering Sea north-south.

BS: *From the Pribilofs?*

EL: Yeah. From the Pribilof Islands ... we had it all the way, but it gets shallow around the Pribilof. Stays flat as a pancake all the way up to the Bering Strait.

BS: *Did you do explosives up through the Bering Straits?*

EL: No. The sound channel ran out before we got to the Aleutians.

(50)

Then, when we got to the Ice and the Chukchi Sea, the submarines took soundings. I think the plan was to see how much room there was between the bottom and the ice and if there were any hills or mountains and if the submarines could get through there. Admiral McCain went in with the *Nereus* as far as we could and then the ice became thick, but it still had channels between enormous blocks of ice. He wanted to see whether he could meander through these channels. So we put over a boat. They didn't want to lose the admiral, so they tied to this boat - just an open boat - they tied a balloon which was painted with aluminum paint for radar reflections. And half a dozen of us with the admiral meandered around these open water areas in the ice. I asked if we could stop and collect samples and he said, "Sure." So we did collect some dirty looking ice that

was dead plankton. This was rather hazardous, but the admiral and the rest of us came out ok. We also took a little detour into Kotzebue Sound. We were so far from shore, I could not see where my grandfather built his house and lived one or two winters. So we proceeded back to Kodiak.

BS: *You didn't go into Barrow?*

EL: No, we did not go into Barrow.

BS: *All four subs went with you?*

EL: Went to the ice. On the way back, I don't know what they were doing. They may have been on their own.

BS: *Were any of your people from the Electronics Labs on the subs as well?*

EL: No.

BS: *No one. OK. Any other people from your lab on the Nereus with you?*

EL: Yes. Half a dozen.

BS: *Um-hum.*

EL: Including Walter Munk.

BS: *Walter Munk was?*

EL: On the *Nereus* from the new Navy Electronics Laboratory and Scripps . . . Scripps, Walter Munk, Dr. Graham Marks, fellow by the name of Root.

BS: *Fred Root?*

(100)

EL: I don't know his first name.

BS: *Canadian?*

EL: No, he was non-oceanographic. Let me think who else. I had a photographer by the name of McFarland. A fellow by the name of John Knauss. He became Head of Rhode Island Laboratory. I guess from Kodiak, we returned home. That was the end of my first cruise to the Arctic Ocean.

BS: *How was the temperature up there? What time of year was that, more or less?*

Summer?

EL: Yes, it was mid-summer. I think we left Hawaiian Islands the 25th of July. It's all in an ad here, all of this has been written up in a volume called, "Bill and Bob - Where did you come from?" for our children . . . family record. This is typed, xeroxed and bound. Only a few copies made.

The second Arctic cruise was on the Canadian Navy ship USS *Cedarwood*. This was a joint effort with the Canadians. My laboratory sent the USS *Baya* submarine and the PCER . . . oh, what's the name of it? *Rexburg?*

BS: *Rexburg? That was another ship?*

EL: Yes.

BS: *That's a PCER?*

EL: *PCER Rexburg.*

BS: *Was it a Canadian ship too?*

EL: No, that's a Laboratory NEL ship - Navy ship. And a Navy submarine.

BS: *And a submarine?*

EL: Baya. B-a-y-a.

BS: *And the USS B-a-y-a.*

EL: That submarine was more or less assigned to the Laboratory. More or less followed the route, stopping at Adak, stopping again at the Pribilof Islands, the *Cedarwood* had both Canadian and American personnel.

BS: *Which ship were you on?*

EL: I was with Tully. What was his first name?

(150)

BS: *On the Cedarwood?*

EL: Yes, I was on the *Cedarwood* - a Canadian ship. What's Tully's first name? Jack.

BS: *Jack Tully.*

EL: Dr. Jack Tully. He was co-leader with myself of this particular ship. We had more of a free hand than we did with the *Nereus* and going through the Bering Sea, we took a more east-west coverage going to the west of St. Lawrence Island near the dateline, stopping in Bering Strait, anchoring in fact, in Bering Strait, measuring the current near the bottom, and through the water column and going up through the ice at Chukchi Sea, stopping at Point Hope and two or three other places. Going ashore, trading with the Eskimos occupied the usual Nansen plankton bottom sampling procedure. A large number of stations. We ran into an Eskimo skin boat.

BS: *Was it called an oomiak?*

EL: Yes. And we asked if they wanted a tow. We tried to tow them. They were going to Nome, but it was too hard on their boat. So we took them aboard. Put the boat on board too. It was a relatively light boat. Took them close to Nome and let them back in the sea. Another . . . this is an insert . . . with the *Nereus*, we put in at Teller, Alaska . From a nautical chart, it looked as though the river emptied into the bay there by Teller, so we took one of the *Nereus'* boats and started up this river and it was pretty peaceful. We saw a skin boat with Eskimos in it coming down the river and we got our cameras out and took pictures of them. They reached down in their skin boat and pulled up a movie camera. Took pictures of us.

(200)

BS: *This was on the Nereus, huh?*

EF: Yes.

BS: *Changing times.*

EL: We didn't have too much fresh water on the *Cedarwood* so when we put into the bay by Teller, the captain brought the ship in close to shore, ran a hose to a creek, a little stream, and pumped water to fill our fresh water supply. There was a trading post at Teller, at which we bought some mukluks, fox fur, ivory jewelry.

BS: *This was on the Cedarwood?*

EL: Yes.

BS: *OK. Did you trade with the Eskimos?*

EL: Well, long story about trading. *Cedarwood* put in at Adak and we asked - the Base was fairly well shut down - it was more active there during the War. . . if they had any extra food. So they gave us gallon cans of carrots, beets and so on. A whole pile of it. We didn't really need it, but we took it anyway. Then when we got up with the Eskimos, the Canadians took this food and traded it for, in one case, for a spear - an Eskimo spear, which I didn't think was too kosher. Another case I remember, they had carved ivory - a little tin can of it. And the Canadian, one fellow, took a piece of this ivory, then took another piece and bought it. One difference in the Canadian ships and American ships - the Canadian ships, you could have liquor. In fact, they

gave the whole crew two ounces of rum a day. Most of them saved it for another occasion. But we in the wardroom had bottles of all kinds of stuff that we could drink at any time we wanted it.

BS: *They didn't have that on American ships though.*

EL: No, they did not have it on American ships.

(250)

Russian ships had it.

BS: *Did you work with Russians up there?*

EL: No, but I'd been on several of their ships.

BS: *Did you, when you crossed the Arctic Circle, did you have a ceremony?*

EL: Yes, we had a ceremony crossing the Arctic Circle.

BS: *What did you do?*

EL: Well, they brought aboard a big block of ice about the size of a bale of hay and all the people who had not crossed the Arctic Circle would have to take down their pants and sit on this ice bareskinned for two minutes. Although I had done it across the Arctic Circle previously, I wasn't exempt and that ice was cold.

BS: *Did King Neptune preside?*

EL: King Neptune presided, definitely.

BS: *Canadian chief? Was it a Canadian big fat chief?*

EL: I expect so.

BS: *Did you have to kiss his belly?*

EL: No.

BS: *No? That's what you do on the equator.*

EL: On the destroyer crossing the equator, they collected all the garbage and made a tunnel of love. This garbage was pretty well fermented. You'd have to crawl through that tunnel and after you got through, they turned the hose on us, cleaned us off. It was really a mess. Well, we stopped at Kodiak and got off, flew home.

BS: *Flew home from Kodiak?*

EL: Yeah.

BS: *So that ended your second cruise to the Arctic.*

EL: That ended the second cruise to the Arctic.

BS: *What was the major work that you feel you did? Just basic oceanography?*

EL: Basic oceanography. Carsola collected enough bottom samples to make a major part of his thesis.

BS: *Who was this now?*

EL: Al Carsola.

BS: *And the next cruise was, which ship?*

EL: The next cruise was on an icebreaker, the *Burton Island* - *SS Burton Island*. *USS*. I don't know what year that was. '50 or '51. Well, I'd like to go back to *Cedarwood*.

(300)

We put in at Point Barrow, but from the previous cruise on the *Nereus*, we believed that there was a big eddy in the Chukchi Sea. And it would converge with the north flowing current from the Bering Sea right approximately at Point Barrow. So we made a network of stations to try to find the difference of the two water masses. Very tight tech work whereby only about one hour of cruising between stations and we took a string of Nansen bottles - this was quite an elaborate network. And the only trouble was that they were so close together that there wasn't time to sleep. One hour cruising time. Then we came to the next station. And we had about 50 stations. So, for 48 hours, a couple of us did not go to sleep.

BS: *This was in the Chukchi Sea - that eddy?*

EL: Well, yes. It came from the Beaufort Sea and kind of went north of Point Barrow. It's true, McClellan got an award for finding it.

BS: *A spin-off from the Beaufort Gyre?*

EL: I guess so. Part of it. Another thing we looked for were gouges in the bottom where ice could have caused it. This was inconclusive. Going back to the *Nereus*, we went into the Kotzebue Sound and we went in as far as we could. The bottom was stirred up with our propeller. We made a big cloud of muddy water, so we had to turn around and get out. I would like to have gone all the way to shore, but no chance. In fact, you could hardly see the shore.

(350)

Let's get back to the Beaufort, to the *Burton Island*. *Burton Island*, we had . . . let me have that picture. An icebreaker could proceed through the ice by pushing it aside where it wasn't too thick, and we could work further into the ice than we could with the *Cedarwood* or the *Nereus*. On the *Burton Island*, we had Bob Fouquet from the University of Washington, Cliff Barnes, University of Washington, the rest were from NEL. Well, there was Wickham and Warren Wooster from Scripps. The only unusual feature of this cruise was that we could get further into the ice and do Nansen stations trying to identify the water masses of the Chukchi and southern Beaufort Sea.

BS: *Did Waldo come with you on this trip?*

EL: He was on board there.

BS: *For the whole cruise?*

EL: I don't know whether it was the whole cruise or not. I don't think so. Actually I didn't even remember he was aboard till the picture showed it.

BS: *And what was the work? You went further north than you had on the other ship.*

EL: Yes, that was the main difference.

BS: *Do you know how far north?*

EL: No.

BS: *But it definitely was further north into the ice than before.*

EL: What year was that?

BS: *1950.*

EL: 1950.

BS: *Right.*

EL: They also sent a ship up in the winter - icebreaker, on which . . . the guy's name . . . Bent Holtzmark.

BS: *Bent Holtzmark.*

EL: Bent is his first name. B-e-n-t.

BS: *On the Burton Island?*

EL: Yes. On the *Burton Island*.

BS: *To Chukchi.*

EL: Well, I don't think they got through the Bering Straits.

BS: *OK. Could not get through the Bering Strait.*

(400)

EL: That's right.

BS: *Now you had a second cruise on the Burton Island. Is that correct?*

EL: Yes. The following year, 1952. Is that right?

BS: *'51.*

EL: 1951.

BS: *I just keep the tape on so that I can refer back to who's ever . . .*

EL: I really don't have much to say about this.

BS: *Further oceanographic data. You took a lot of sampling too.*

EL: Yeah. Cores. I know one instance, we had helicopters on the icebreaker and they could scout out the more open water areas. I was up with one helicopter, looked down at that rough ice - it's kind of scary. I said, "What happens if your motor konks out? What would you do?" He said, "I'll show you." He reached up and turned off the motor. Scared the life out of me. Before he hit the ice, he turned it back on again. But that wasn't . . .

BS: *Was it Bell? Bell helicopter? Bubble?*

EL: It wasn't very big. I don't know.

BS: *Yeah. Probably a Bell.*

EL: Another time, we saw a polar bear and they took a rifle, shot the bear, put a line on it, brought it back to the ship.

BS: *You shot the bear?*

EL: I didn't shoot it. I wasn't even there.

BS: *OK. The helicopter brought it back.*

EL: Yeah. The helicopter brought it back, skinned it, cooked it and we ate it. I don't think it was a very nice thing to do.

BS: *How did it taste?*

EL: Tasted like sweet veal.

BS: *Really. Good?*

EL: Yes, I thought it was quite good.

(450)

EL: Reminds me, at Bikini, only the scientists could go to the different islands. There were many islands in this atoll. And only the scientists could go collect shells and so on. And what we'd do is take an empty bottle and say we were out collecting and if one of the guards stopped us we would say we were collecting. That's where I got my shells.

BS: *So they . . . you were collecting and they let you go. Official work.*

EL: I think the next cruise was by submarine.

BS: *And which submarine was that?*

EL: That was the *Baya*. I mean the . . .

BS: *B-a-y-a?*

EL: No, that's not right. Well, my mind went blank. *USS Skate*.

BS: *The Skate. OK. This was with Commander Calvert then.*

EL: He was the commanding officer of the *Baya*, atomic submarine.

BS: *Baya or Skate?*

EL: The *Skate*. And the Executive Officer was Nicholson.

BS: *That Admiral John Nicholson? The same Admiral that lives here?*

EL: Yes. Admiral John.

BS: *Lieutenant Commander, then.*

EL: I think so. He was at the Pole.

BS: *Tell me about the cruise. The Nautilus was up there about the same time, was it not?*

EL: Yes. They would not let us go under the ice until the *Nautilus* came out. I shipped some equipment to New London. I had a light meter mounted on the deck, facing upward. We had a number of echo sounders facing both upward and downward.

(500)

I had a filtration process for plankton. There was some sort of hydrophotometer to measure the transparency of the water.

BS: *You were the Chief Scientist, correct?*

EL: On all these cruises. I don't know why I wound up being on top of the totem pole.

BS: *Well, it's because you're good.*

EL: Because there's nobody else left. The high people like Sir Fleming and Shepherd and Russel and so forth all went back to their schools and former place of work. I was the last man standing. Anyway.

BS: *You consider yourself lucky?*

EL: As always. Well, I think there were nine scientists and over 100 crew. It's written in there.

BS: *That's OK. Now you waited until . . . this was in the summertime of 1958. OK, you waited until the Nautilus came out and then you proceeded into the Arctic.*

EL: The *Nautilus* came in from the Pacific.

BS: *Um-hum.*

EL: Had a hard time getting through, I think.

BS: *And it just went straight across and out.*

EL: Yes.

BS: *OK.*

EL: Calvert wanted to do something fancy all the time.

BS: *And you more or less waited until they came to the edge of the ice.*

EL: Well, we didn't stop there. We knew they were out.

BS: *I see.*

EL: But we couldn't go in until they did.

BS: *I see.*

EL: They went out near the coast of Greenland, by Spitzbergen. We went under the ice.

(550)

We ran at 165 feet.

BS: *You mean 165 feet of water?*

EL: No, keel depth.

BS: *Keel depth, OK. So where would that put the top of the sail. How far below the ice?*

EL: I don't know.

BS: *OK. What did you do first? Did you go to the North Pole or did you go do something else.*

EL: We recorded the depths of the water and the thickness of ice and the light intensity. It was light all day, all night. And we were set on going to the North Pole - at least the captain was.

BS: *How could you tell how thick the ice was?*

EL: Well, there's breaks between blocks of ice, gives you the zero reading.

BS: *I see. So your echo sounder would ping off the surface of the water from the bottom.*

EL: Yes, that's correct.

BS: *Did you surface?*

EL: We surfaced nine times in polynas.

BS: *Were these the first surfacing's through ice by submarines?*

EL: No, the *Nautilus* did it previously, but they were trying to do it at an angle. Got out the opening in the ice and then come up at an angle so as to hit the opening. We got under the opening and when it stopped completely, ascended slowly.

(End of Tape 1 - Side B)

(Begin Tape 2 - Side A)

(000)

BS: This is Tape 2 with Dr. La Fond, Side A, on his interview of 27 February 2000 at his home in San Diego.

EL: On the *Skate*, we ran under the ice, measuring the depths of the water and the thickness of the ice above. Went to the North Pole and the captain steered a circular course, two mile radius, to go around the Earth in about 45 minutes. That's the fastest most anybody had gone around the world. We also found. . . there was no polyna at the North Pole, but we found one a few miles from the North Pole, surfaced. The captain also contacted Ice Station Alpha, said we were coming. They said they had a polyna near the station that we could surface in and that they would run an outboard motor to make a sound so he could home in on it. But, most of the people in the submarine were tired, so they stayed in this polyna overnight. But the poor Alpha person who was the Director ran his motor all night long. He was useful in detecting the particular opening in the ice. We surfaced there. Some of us went over to the Station, gave them some ice cream, brought them on board for a meal. Ice was closing in on us and we had to get out. We surfaced a total of seven different places. Most places we could get out on the ice, sample the polyna, sample the ice.

BS: How far did you surface from the North Pole? You said you surfaced in a polyna near the North Pole.

EL: It's a matter of miles. Since I was the Chief Scientist, I couldn't have a bunk. All the rest had these layered bunks.

(50)

They quartered me in the wardroom with a drop down bed. The only trouble with this was that the ward room was occupied to at least midnight, and then they opened it up again at 6 o'clock in the morning. So they didn't allow me much sleep. We had very good food on board, cooked in a very small galley. One time we had a fire drill. Without notice, the submarine was filled with smoke. The steward in the wardroom gave me a gas mask, helped me put it on. But it was scary because you couldn't hardly breathe, but eventually it cleared up and all was well.

BS: *Which ocean did you exit from?*

EL: This is the way we came out, more or less.

BS: *Same place you went in, you came out? North Atlantic?*

EL: Yes, we went in the North Atlantic, we came out the North Atlantic.

BS: *How was Admiral Calvert to work with? Commander Calvert at the time.*

EL: Oh, he was a very capable person. Very well read. But he was after publicity and he directed one officer to go through every magazine in the wardroom, write to the editors and say we have his magazine on board the *Skate* at the North Pole. I saw two of his letters published in the magazines.

BS: *Interesting.*

EL: He shot a torpedo in the ice but it was my recollection it didn't explode. It slid up on the ice. We came out, we got a lot of depth data. One of the NEL personnel constructed a topographic chart of the Arctic based on our data. What was his name? Married the Reville girl. Gun collector. Shumway. What was his first name? George. George Shumway.

BS: *Tell me, were there any personnel problems, physical problems, mental problems of people being cooped up in a submarine for so long under the ice?*

EL: We had a new navigational system called the Inertia Guidance System being tried out, I think, for the first time. Instead of units of ten, it was units of eight. Seemed to work quite well. But the operator didn't like living on submarines. I don't know whether he was scared or just what, but he wasn't operating at full capacity.

(100)

The captain was afraid he might do some damage, so he left him in his State Room with supervision. When we came out, we headed for Bergen, Norway. The Ambassador to Norway, the US Ambassador to Norway, was a woman. She came to Bergen, said we'd be there at noon and they calculated backwards so we just touched the dock exactly at noon. Had to go up a long fjord. Wasn't much of a ceremony, but I met some Norwegians who I have heard of. And the next stop was Oslo, and there we did have a party. We wanted to stop . . . at Oslo, I met a man by the name of Odd Dahl, who had made a current meter for the *Maude*. So Sverdrup brought it over to Scripps when he came and I had it mounted on the Scripps pier.

BS: *What was the name of the meter?*

EL: It didn't have a name. It just - I call it an Odd Dahl meter.

BS: *And what did it measure?*

EL: Measured current speed and direction .

BS: *On the Maude?*

EL: On the *Maude*, right. It's OK for places like the Arctic where the water's slow motion, but when it was near the breaking waves at the end of Scripps pier during a storm, it would be hard on the meter. More than one night, I've gotten up, when I lived there - I lived on the campus - and go out on the pier in the storm, pull the meter up out of the water to keep it from becoming damaged. Anyway, we toasted everybody including their relatives with - what did they call that stuff? What did they call that drink?

BS: *Aquavit?*

EL: Yeah, aquavit. We wanted to stop in Denmark, Copenhagen, but they would have nothing of an atomic submarine. We did stop in Belgium. They were having the World's Fair, 1968. That's where I got off of the sub and flew home. The other person from the Lab was Rex Rowray.

(150)

Well, I think I'm through.

BS: *Did you have Walt Whitman with you?*

EL: Yes. Had Walt Whitman.

BS: *Where's Walt from?*

EL: He's from the Hydrographic Office.

B S: *In Washington?*

EL: Yes. He took the ice data, thickness of the ice. Took it back to the Hydrographic Office.

BS: *And that was your last cruise to the Arctic?*

EL: Last one. Flew up to Prudhoe Bay one time.

BS: *What was that for?*

EL: In connection with a meeting in Fairbanks - the Alaskan Science Congress, about 1970.

EF's Wife: You want to know what year it was? Let me go back to the Pole. You had drinks at the North Pole too. The captain declared the . . .

EL: Yeah. Broke out whiskey. Gave us all a drink.

BS: *Medical.*

EL: Yeah. Cold outside.

BS: *Medical emergency.*

EL: Cold outside.

BS: *And that was in the summer. Did you go on the next cruise with the Skate, too?*

EL: No, they broke through the ice, and so on. Didn't do that.

BS: *I see. So he only surfaced in polynas on this cruise.*

EL: Yes.

BS: *He didn't break through the ice.*

EL: Correct.

BS: *I see. Now, were you involved afterwards with managing any of the polar research programs that others took to the Arctic?*

EL: No.

BS: *What was your job after that?*

EL: I was more interested in the Indian Ocean. I headed the Naga Expedition in the South China Sea and the Gulf of Thailand. International Indian Ocean Expedition. Katherine was with me. Took in Arabian Sea, Bay of Bengal, Andaman Sea, that was a big deal.

BS: *Which ship were you on during the International Indian Expedition?*

EL: *The Anton Bruun.*

BS: *The which?*

EL: *Anton Bruun. Anton.*

BS: *Anton.*

EL: *Bruun.*

BS: *Bruun. Indian ship?*

EL: No. It was President Truman's Presidential Yacht.

EF's Wife: *The Williamsburg.*

EL: It was called the *Williamsburg* at that time. They took and modified it with winches.

BS: And that was run by NEL?

EF's Wife: *The Anton Bruun?* That was a Woods' Hole . . .

Interviewers comment: Katherine La Fond (KL) was present for this entire interview. The La Fonds were obviously a very loving and intimate team. Dr. La Fond's work was lovingly

shared by his wife during his entire career and at this point I felt that her input was an important part of this interview and I encouraged her to participate.

BS: *Wood's Hole?*

EL: No, no, it's not Woods. Well, I guess they got the money from National Science Foundation.

BS: *You were at NEL during that time though.*

EL: Yes, took a leave of absence all the time.

BS: *To do those. What took you to India? How did you get there?*

EL: That's another session.

BS: *Well, just in brief.*

EL: Well, Henry Menard, who was in my group - we kept changing the name of it, the group. He came into my office and said, "Here's a brochure by the State Department." Little small thing. And I looked at it. Brought it home to Katherine and said, "You want to go to India or do you want to go to New Zealand?"

(200)

She said, "Well, you've been to New Zealand. We don't know anything about India. So, let's go to India." So I applied. I think I was the only person in the world who applied for this Fulbright grant and "you're it." And then we got cold feet. Said, "Well, I'll have to have a ship. I'll have to

not give lectures, course work. I'd do research." So, "Yes, yes, yes, yes come." So, we packed up two boys and how many pieces of equipment?

EF's Wife: I think there were 23 pieces of luggage. Twenty-three, twenty-four pieces of luggage.

BS: *Which year was this?*

EL: '52.

EF's Wife: '52. Everybody said, "Don't do it."

EL: We took a plane to New York. The *Queen Mary* to London - to England. Then it was going to - American Express was going to provide us with transportation beyond London, to India. Well, they hadn't heard of us in London. We said, "OK, we want to go home. Had enough of this silly stuff. We didn't want to go in the first place." So they said, "If you go down and find yourself transportation, we'll pay for it." So we walked up and down the streets and finally got passage on the *Himalaya* from London to Bombay. We got to Bombay, they gave us a handful of money. They were ready for us there. But they made such a stink about bringing us to London. Then we checked into the hotel. Made bookings for the train across India. So we were going by train to Andhra University.

BS: *This was in Gullah?*

EL: No, it was on the opposite side on the Bay of Bengal. And so, well, we got our tickets to the train and immediately got dysentery. Weren't used to their food. Getting the stuff into India was something. Had 23 boxes, had BT Nansen bottles, nets and samplers _____, hydrophotometers and so on, all boxed up. And they said, "What are these?" And I said, "They're oceanographic

instruments." "How much are they worth?" "Oh, a couple of thousand bucks." "You have to pay 37% import duty." He showed us the book. "See here. 37%." I said, "I don't have money and I wouldn't pay it if I had it." So, anyway, they locked it up.

(250)

So we had to communicate with Delhi and finally I got it sprung with the stipulation that we had to export it within a year. So we got on the train, very dirty, soot, coal-burning engine. Why don't you tell this, dear?

EF's Wife: Well OK. I'd be happy to.

BS: This is a very unique opportunity to get an interview with Katherine LaFond, Dr. LaFond's wife, who was a very active participant in his decisions to become a scientist, to become an oceanographer, and was involved in his research throughout his career. Certainly more than a supportive mode, as most wives are. So I'll take this opportunity to have her present some of the issues that she faced when she met Dr. LaFond and the rest of their life together.

KL: Well, I had graduated from Bishop's School here in LaJolla, and then I spent two years in Berlin, Germany, and I had just come home and was casting around for something to do and I met, I think it was Dr. Pierce at that date, who was Head of the Chemistry Department at State College. And he suggested that I audit some of his classes there in the chemistry department, which I did. And I think there were one or two women in the chemistry department there besides myself. So one day, Gene comes up to me, "Miss Gehring, will you please help me with my German?" He was taking German. Of course, German to me by that time was my second language. And so I helped him with German and that was how we met, doing German together. And then in 1932, he graduated and I left the school. But this was the Depression. And he tried

so hard to get a job and tried many, many different places, many times and was unsuccessful. And in the meantime, I had been volunteering at the poultry laboratory at the zoo and also with Dr. Schroeder at the zoo hospital. And in trying to improve my microscopic work, I went out to Scripps and talked with one of the women who was a pro at making these paraffin sections. And while we were there, we walked across the campus and ran into Dr. Moberg. And she introduced me and said that I had come from the zoo, that I was looking for something. Well, he was looking. If you have chemistry, I have a job for you. These salinity samples have come up from my graduate student and they need titration. I will pay you \$100 a month. And in those days, that was a lot of money. And I couldn't afford not to accept, so I gave up the zoo work which I loved and went out to Scripps.

(300)

And I started out doing the salinities for Dick Fleming, and then it gradually branched out into other things. I had only been at Scripps for maybe a short month when Dr. Moberg came in and said, "Will you make a list for provisions? A ship is going out for 10 days on a cruise and what provisions should we provide? There's no refrigeration, but do your best." So I made a list of provisions to buy and the menus and so on. And then at different, other times during these three years I was there, I was the first woman who ever went out on a cruise with the old Scripps ships. But they had no overnight accommodations for a woman, of course, and so it was only a day cruise. But then I would come home with all the samples that we collected. The other boys said, "I've worked all day," and go to sleep, but I had to stay at Scripps and run those samples. But I worked there for quite a while and I persuaded Gene to come out and talk with Dr. Moberg to see if there was something at Scripps that he could do. And there was nothing right then that he could do, but Gene was so tired of trying to find a job, he said, "I'll be happy to come and work just for nothing because it's such a nice environment. I would learn something here." So, he did and that was the beginning of his work there at Scripps. Eventually, they would find a little bit of

money and then a little more and a little more, and that worked out very nicely. And then, nepotism though, was in force. Members of the same family could not work in the same department. So that - as long as we were working and of course, \$100 a month meant a great deal and when Gene was still not secure in his job, that . . . I was afraid to give up my job. But in the meantime, he had decided to continue his education and go on up to Berkeley and Dr. Vaughan had encouraged him to do it. And so I took a leave of absence and we announced our marriage.

BS: *And when did you get married?*

KL: In 1935.

BS: *And you worked together for . . . without announcing it for how long?*

KL: Oh, yeah, we lived separately there for a year. I had a cottage down below on the campus and Gene was up in what was called "The Dog House," up at the top of the hill. It had been a laboratory storage, kennels, for the dogs at one of the clinics in LaJolla. But that was the Dog House. He lived up there and I lived down at Scripps. But then, when he went up to Berkeley, I went up with him. He was, theoretically, on leave of absence.

BS: *And then you announced your marriage.*

KL: And that's when we announced our marriage.

BS: *Did your family know you were married?*

KL: Well, they had a pretty good idea, but they. . .

BS: *You didn't tell them.*

KL: No, I didn't tell them.

BS: *Did you tell your family, Gene?*

EL: No.

KL: I sent everybody announcements. My family and his family. They all got announcements at the same time. We went up to Berkeley and I went on WPA there and an interesting thing happened while I was there.

(350)

WPA got a call for a librarian from the Shell Oil Company and they called me in and said, "They need a librarian. You would be just fine. Go down and apply for the job." And I did and I had an interview with this man and I filled out the application and he looked at the application and he said, "Oh, you're married." And I said, "Yes." And he said, "Well, all our girls are single, at least we think they are. And we don't hire any married women. I'm very sorry." So that let me out of that job. There's a reason for some of these things that happen in life. But I finished up my work up there - I worked in the Botany Department at Berkeley. Gene finished his school work there - his year of work and came back down to Scripps and I gave up and came down too. And then, when he came back to Scripps, I was without a job.

BS: *Where was Botany at Cal?*

KL: Botany was on the campus.

BS: *Arts Sciences Building?*

KL: Yes.

BS: *I worked in the Arts Sciences Building.*

KL: I worked for Davis.

BS: *I worked for Herb Evans. He was the anatomist.*

KL: Yeah. I worked for Dr. Davis there in the Botany Department. But then I gave up and came back to Scripps and Roger tried his best to get around this nepotism business and he hired me, but he had to . . . finally, he paid me out of his own pocket.

BS: *Would you like to take a break and eat something?*

EL: You ready for lunch?

KL: OK, sure. I'll say 20 minutes, whatever.

EL: OK.

BS: *When you said Roger, you meant Roger Revelle?*

KL: I meant Roger Revelle. But he paid me out of his own pocket.

BS: *Now this is in 193?*

KL: 1937. '36-'37, we were in Berkeley. We came down in 1937, in through there. And then I was without a job, but through Dr. Schroeder, I met an ophthalmologist in San Diego who wanted some German medical books translated, so for quite a long time, I did some German translation for him. Dr. Kilgor, I believe his name was. And I loved that. I enjoyed it. My father was a doctor and mother was a nurse and I was raised in a medical atmosphere and so I had a good vocabulary both in German and in English and it was very easy for me and I enjoyed it greatly. But then, that job ended and I had the two boys and I stayed home raising boys, but I also always had worked with Gene.

(400)

He'd bring some of his work home and we'd do it together. So we've always, throughout our whole marriage, have worked together. And then Gene came home. . . we moved over into this house from Scripps and he came back from Bikini and then we moved from Scripps out here because he was no longer employed by Scripps. So we came here and bought this house and we were here and Gene brought this notice home. "Would you like to go to New Zealand or to India?" Well, of course, I like to travel too, and that was an idea that would be something new. So after much discussion and trying hard to decide what would be best and so on, we packed up everything from the house and made all these - Gene borrowed equipment from the lab, and we set off with the 23 boxes of luggage, suitcases, everything, you name it. And went off to India. And that was really very good. We were the only Americans they had known. Their location, I should say - it's about 400 miles south of Calcutta and North of Madras. We were just out in the middle. But it was a large university. The set up was very much like Berkeley with a central university and then these sister universities in the environs. But we were at the central university there.

BS: *What was the name of it?*

KL: Andhra. A-n-d-h-r-a. Andhra University. And people had no idea what to expect. There had been many British people who had lived there, and they knew the British, but they had never had the Americans. And they didn't know much about America either. One of the first things when we lived there, one of the students came up to me. We had a big porch and I sat on the front porch with a Sears & Roebuck catalog and explained all about the United States in one easy lesson and he came up to me - what was the first thing that you noticed about women . . . or, about India. What made the biggest impression to you about India? And I said, "Women carrying water on their heads." "Well how else do you get water?" I mean he just was so sincere about how else do you get your water? And I said, "Well, our water is piped in." And then another boy from the campus came over one day, very distraught. He had just gotten a grant to come to the United States, but he was a little bit afraid to come. And I was talking to him about it and he said, "Well, tell me. What are my chances of crossing the United States in a train without an Indian attack?"

(450)

I mean, they knew that much about the United States.

BS: *They saw our cowboy movies.*

KL: Yeah. They knew that much. And, of course, in 1952, they were just piping water up and down so many of the little outlying settlements. They all had to carry their water. But we had one of the only flush toilets on the campus. We had no refrigeration, but we did have water. We kept the water in the bathtub because sometimes the water was shut off too. So we always had a

bath tub full of water. But, we did have running water. And they built me a kitchen. They piped water into one room to make a kitchen and they built me a stove very much like the stoves that you see in the national parks. You know, charcoal burning stoves. We had charcoal. And for our first Christmas, I gave. . . I had a reception and I made it known. I had a wonderful bearer. He was really very good. And we had a good grapevine and I made it known that there would be no meat. Everything would be vegetarian. And all I served, I made umpteen umpteen chocolate brownies. And we had tea. And I bought a lot of biscuits, but they're cookies. But everything was not in packages, but in tin boxes because of the insects that get into everything. And so I had the chocolate brownies and the cookies and the tea. And Thomas served everything. The women all congregated in the dining room. The men all congregated out on the front porch. They ate cashew nuts which grew on the campus. Very common. But I had cashew nuts and they ate the cashew nuts, they ate the biscuits, they drank the tea, but the sweeper took all the chocolate brownies home. It was a Hindu area, the Brahman, which is the highest cast among the Hindus. And so none of them would ever touch any meat or fish. Even all degrees of vegetarianism, some will eat onions. Some will not. Some will use eggs, some will not. But we tried and anytime they ever had anything to eat with us, we always had their vegetarian type of food. So, but it worked out very nicely.

(500)

Gene got his boys together. He had a few classes that he did have in spite of the fact that he didn't want classes. But he had classes and the Navy would loan him Navy mine sweepers and I think he made 15-17 cruises out in the Bay of Bengal and these mine sweepers with the borrowed equipment that he had brought and some he had made there in Waltair, which is the main city in Visakhapatnam. It's a suburb of that. But I remember that I was with him when they did that. They dug a hole in the ground to cast a lead weight. They dug a hole in the ground, poured in the lead, put a pipe in it and that made the weight for the corer. But Gene took this

equipment out with him and sometimes - a time or two, not too often, but a time or two - they would lose equipment overboard. Well, now he had signed that with his life, he would export all that equipment, so the case is still pending.

One Christmas, my mother wanted to send me something and the only thing she could think of was to send me a care package, which she did, and the care package came on through and I received it. But, I wasn't in a desperate state for food, you see, so I gave all my food away, but I was supposed to have paid duty on it and done all this mess. So that case is still pending too.

BS: You said you worked with Gene all his life in his work. Did you get involved in any of the Arctic work, the data, or . . . ?

KL: I did the data when we came back from India. I worked with him in the Indian Ocean expedition. I call it chief cook and bottle-washer. But I took all the records. Gene and I were up for every station. He set the watches for the other boys who did the chemistry and the oceanographic work, six on six off, which is the way most of them do. But Gene and I were up for every station and I took all the records - at 8 o'clock we did so and so, and you know. So, I did all those records and then when we came back and were working in Paris, I did all the computations from those data.

(550)

BS: In Paris, France?

KL: Yeah. Gene was there with UNESCO for six months. And I was there.

EL: I was Deputy Director of the Office of Oceanography.

BS: *Deputy Director of the Office of Oceanography for UNESCO.*

KL: And he was there and I was with him and I did all the work on that data at that time.

BS: *The Indian data.*

KL: The work that we had taken out on the Indian Ocean.

BS: *You did some classified research, I'm sure, when you were up in the Arctic on the Skate. Is that not correct?*

EL: Well, it's hard to tell. Classified in some ways it is and some ways it isn't classified.

KL: Well, all your Bikini stuff was . . . That motivated me mostly to get Gene to write his biography. So that I wanted our boys, all during the war years, everything was classified, and I wanted our boys to know what he was doing during all those years and all those trips that he took, and so years later, when it was all declassified, that's when he wrote all this down, you see.

BS: *The rule is 40 years in general. Sometimes things can be classified longer. Not usually technical stuff, but personnel stuff to protect spies.*

KL: Yeah. But then, later . . . many years later, when we came back - it was in the late '60s, I think, in the mid-60s, when I came back and had joined him over at the laboratory.

(End of Tape 2 - Side A)

(Begin Tape 2 - Side B)

KL: He was still working at NEL and I came on board then. And that was kind of an exception for a wife to be working at the Navy.

BS: *You went to work for NEL.*

KL: Yes, I went to work for NEL too.

BS: *For the same office?*

KL: For the same office. We worked together.

BS: *The Arctic Projects Office?*

KL: Well, it wasn't Arctic work as much as some of the Indian work and some of the work that he was doing off the coast here - all that work that he would bring.

BS: *You didn't get involved in any of the Arctic cruise thing?*

KL: No, I wasn't involved in any of the . . .

BS: *Did you have clearance there.?*

KL: I had at the Lab, but not during the Arctic when he was there. But when I went to the Lab, I had clearance. And we went to Thailand together. We went over to Viet Nam when the war was

about to wind down. Both of us, we were at the Lab, and we were asked to go over to Nhatrang to the Oceanographic Institute there and see what they needed to restock the institute and start up their work and so both of us went over to Nhatrang, over to Viet Nam and had some experiences over there, I would say. But we enjoyed it. The war was still going on. They were shooting at the house where we were living. There were oil tanks not too far away and they were shooting at those. And they were shooting at the airplanes as we were flying in the little Navy plane and so on. So we had quite some experiences over there.

But went through the Institute and the thing that impressed me mostly - there at the Institute, they had this beautiful library. It had been French-Indo China and the French had used . . . and they had this very, very beautiful library of hand-painted, hand-drawn, all the specimens, every fish that had ever been caught in that part of the world was there, but it was a very exceptional library. They had that and then they had the big laboratories of pickled fish. They kept them dark so they wouldn't fade, but there were thousands of jars of pickled fish in there. But it was really a very interesting place. The Director is still a very good friend of ours. He was independently wealthy because his wife had a pig farm. So he could go abroad and buy books and so on for his Institute because he had money to do it. You see, he was moonlighting, so to speak, that way. But then, after the war, he had quite some experiences and I can say this much about it. We got a letter one time asking us to sponsor him and before we could answer it, Saigon fell. Then I called the Red Cross and asked, "What can we do?" and they said, "You do more harm for him than not. Just leave it alone." So we did and quite some time later, we got a letter that had been mailed from some priest in Canada - came to us somehow he had smuggled a letter out and gotten a letter to us. But what had happened when it fell - he and his wife and four little children walked down to the dock and got on the boat with the clothes on their back and that was it.

(50)

And they got out to sea and I think they were shot at and had all kinds of problems, but eventually a US Navy boat was out there and picked them up. Brought them in and we heard from him from some place in Pennsylvania and we kept up with him again. And he was trying to work on worms . . . his specialty was marine worms. And all of us who are oceanographic people here that had known of him, tried to get him jobs and he finally got a job here. But he was a really interesting experience.

And some of the men that Gene worked with - now he was in Thailand for 3 months there over Christmas time, working with the Thai Navy. Some of the men he worked with then were lost at sea. For instance, one man, I think his name was Hi. Gene was fond of him. Well, anyway, he was out on a cruise and they boarded the ship and I think they molested his wife and he went to protect her and they threw him overboard.

BS: *Who?*

KL: So, there were things like . . . there were lots of things happened there. But that was some of the work that we had been doing together.

BS: *Well, you've had a wonderful life together. Very close.*

KL: We've had a very close, very . . . 65 years this fall.

BS: *65 years.*

KL: 65 years.

BS: *You're going to stay with it.*

KL: I'm going to stay with it. I get all these letters from these matrimonial companies and you know, "Would you like to meet somebody?" and I call them up and I say, "You might as well take my name off your list."

BS: *I've got one more question for you Gene, if you'd sit down over there.*

KL: Let me get up.

BS: *I'll get your picture too. This is my project for the pictures.*

KL: Did you want one or both?

BS: *Well, why don't we get both of you. Well, why don't you let me get one of Gene and then you sit down again and I'll get you both. How's that?*

KL: You get Gene.

BS: *I've got a question for you too, to answer. You said that you got into oceanography almost by a fluke. You've had a long career in it. Have you anything to comment on it, any regrets of what you could have done in your career or have things turned out better than you ever expected?*

EL: Well, we had a lot of decisions, but I think we made the right ones each time. So I really have no regrets. I don't know what I would have done differently to come out as well as I did.

BS: *Why don't you snuggle up to this guy and I'll get your picture. And we can call it a day.*

KL: Once when Gene was offered a job in Washington, DC. That was about the biggest decision we've had. Whether to go. And we talked about it and then decided not to.

(End of Tape 2 - Side B)

End of Interview