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Yuen, Heeney Yuen, Linda ~ Oral History Interview

Edward Glazier

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

Interview with Heeny and Linda Yuen by Edward Glazier

Summary Sheet and Transcript

Interviewee

Yuen, Heeny
Yeun, Linda

Interviewer

Glazier, Edward

Date

August 3, 2016

Place

Honolulu, Hawaii

ID Number

VFF_HU_HY LY_001

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Biographical Note

Heeny Yuen was born in 1926 in Hawaii. After leaving the Army, he completed his bachelors degree at the University of Michigan. He then returned to Hawaii and began a career in fisheries management at the Honolulu Lab while a graduate student. His first job was as a plankton picker. Over his long career, Heeny's research focus was varied with his later work focusing primarily on tuna and shark. He participated in numerous research cruises throughout his career over the vast Pacific territory. He retired in 1991 and as of this interview still lives in Hawaii.

Linda Yuen was born in 1927 in Hawaii. She attended the University of Michigan. She and Heeny married in 1951.

Scope and Content Note

Interview contains discussion of: set up of the NOAA lab in Hawaii, research trips in the Pacific Ocean, social interactions between scientists, visiting international scientists, family histories, life in Hawaii, mapping Pacific currents, aku feeding, tuna canneries in Hawaii, native Hawaiians at the lab, impact of early 1970s budgetary cuts on research

This interview with Heeny and Linda Yuen contains a rich description of Heeny's experiences on research cruises around the Pacific Ocean, as well as their social experiences at the Honolulu Lab and the people they met and befriended over time.

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Transcript

Edward Glazier (EG): This interview is being conducted as part of the Voices from the Science Centers project, funded by the Northeast Fisheries Science Center. It is also part of the Voices from the Fisheries project, supported by the National Marine Fisheries Service Office of Science and Technology. My name is Edward Glazier and on August 3rd, 2016, I had the great fortune to speak with long-retired National Marine Fisheries Service biologist Heeny Yuen and his wife Linda, who supported her husband in his scientific ventures since the 1940s, well prior to the NMFS [National Marine Fisheries Service] Honolulu lab on the campus of UH [University of Hawaii] Manoa in 1951. Although Heeny retired from the Department of Commerce in the early 1990s, his memories are rich and vivid and they are given even greater meaning, and in some cases better validity, through the comments of Linda, who's wit and insight regarding all things local, Hawaiian, and fisheries, are indispensable to the conversation.

Here we join Heeny, and eventually Linda Yuen, midstream in a long, lovely, and informal talk story discussion of science, culture, and discovery in the vast reaches of Oceania following World War II.

Heeny Yuen (HY): And that meant there were a lot of Hawaiians because the Hawaiians used to fish, most of them had their apprenticeship in... oh, what's that town, down at Kona, on the Big Island?

Edward Glazier (EG): Kailua?

HY: Somewhere... uh...

EG: Kealakekua

HY: Huh?

EG: Kealakekua?

HY: No, it's a small village...

EG: Oh, uh, Miloli'i?

HY: Huh?

EG: Miloli'i?

HY: Miloli'i, yeah, yeah, Miloli'i...

EG: Yeah, Miloli'i, or Ho'okena...

HY: Yeah, you have to go visit that, well I don't know about now, but, they used to talk stories about how they hadn't overfished, and...

EG: Yeah.

HY: Anyway, so. With that we used to have luaus a lot [laughter] . . . The Hawaiian people, they, see Howard Kamau, his wife was, uh, a hula teacher, they have certain, taught hula, they have their own clubs and they enter the hula contest every year. Oh, I forgot her name. And an older relative, who used to dance for the queen. But anyway, they could set up a luau in a hurry! [laughs]. But it was just fun to do. The pig, roast the pig and all that.

EG: The imu.

HY: So. Yeah.

EG: So, you went to University of Michigan.

HY: Yeah, I...

EG: Yeah.

HY: Well, the way it started out, when I got through high school in 1944, I was going to be eligible for the draft and all of that, so I says well, I will go when they call me. So, I finished my freshman year, just about the end, close to the end of freshman year I got my notice. At that time, high school advisors, all they knew was doctor, lawyer, merchant, chief, you know. You go to college, that's what you do. So, I started out as a pre-med student, got into the service, came out with, hey, I can go to college anywhere and the government's going to pay for it, you know. Maybe it's a good time to get off the island, learn something.

EG: Where did you go to high school?

HY: Huh?

EG: Where were you in high school?

HY: Hilo High School

EG: Hilo. Okay, Big Island, yeah.

HY: Class of '44.

EG: Okay.

HY: And, um, it was hard to get into most universities. Oh, this is Linda...

Linda Yuen (LY): Oh, hi.

EG: Hi, good morning.

LY: Hi, hi, sorry, I didn't know you were here already, okay. Let's see, we can put this [coffee and food tray] ... no I can't put it there, watch out, I need a...

HY: A magazine or something?

LY: I need, yeah. Okay.

HY: How about a newspaper?

LY: Okay. Can you close that door, Heeny, so that the air conditioning... oh, no, not there, um, let's see, we'll just... Well, I'll put it over here. Would you like a cup of coffee?

EG: Sure.

LY: Okay, I'll bring it, I'll put it here, and we don't have to worry about it.

HY: Might as well take advantage of the easy chairs.

EG: Yeah, yeah.

LY: So, I am so happy, you know.

EG: About?

LY: That something like this is happening. I really am. Because I think it was a unique organization. I just am, you know...

EG: I brought some scones.

LY: Oh you did, oh perfect. All right, look we, we have some milk. Do you take milk in your coffee? We have soy milk.

EG: A little bit.

LY: Okay so we'll go and fix these first.

HY: Well, anyway, Michigan was one of the few states that were accepting out-of-staters because everybody had a lot of veterans with the GI Bill. So, I got there ...

LY: Okay. I guess you should come and put in your milk? I think...

HY: And it's something in Hilo, to make a long story short, there's this doctor in Hilo who got recommended, reprimanded by the medical society because he was--

LY: How much milk should I give you?

HY: --giving special low prices to certain...

LY: Little bit?

EG: I'm sorry.

LY: I've forgotten your name.

EG: Ed. Edward.

LY: From where?

EG: Well, grew up in North Carolina [and elsewhere].

LY: North Carolina, oh.

EG: Here since the mid '90s [and elsewhere].

LY: What did I read about North Carolina. It's a place where intellectuals and something go to, seems like. Is that correct? Because of the university, maybe.

EG: Yeah, yeah. We're on the coast, so.

LY: Oh you are? Sounds...

EG: Thank you.

LY: What are you doing?

EG: I'm a social scientist--

LY: You are.

EG: --so I work in fisheries from the human part.

LY: I see. Social scientist. I'm a social scientist, too. I was a psychology major and social work was my graduate work and I did school social work.

EG: I'm here this morning with Linda and Heeny Yuen.

LY: Yes.

EG: Yes.

LY: Okay.

EG: What is the date, it's August... 3rd.

LY: Are you recording this?

EG: Yes.

LY: Okay.

EG: August 3rd, today, right?

LY: Today's Thursday.

EG: Thursday, right, in the morning. We're in downtown Honolulu. Yeah.

HY: Anyway, this doctor got reprimanded by the medical society and they says, "oh, the guy was just trying to help somebody." So I says, "I don't want to be with that guy." So I, I dropped pre-med, and this is when...

LY: I can't hear you.

HY: I took some, you know, they had this career advisory system, you go and take tests and, so I went and took the test and they says, "uh, have you ever thought of being a minister?"

LY: Heeny, I think you'd better let Ed lead the, uh...

EG: No, no, no, this, this is perfect.

LY: Okay.

HY: And...

EG: He's talking about his background, so, yeah.

HY: Anyway, to make a story shorter, I switched from theology to ichthyology.

EG: [laughter] I like that.

LY: He wanted to make that line. He was leading up to it.

EG: Did you grow up on the Big Island as well?

LY: I grew up on Kauai.

EG: Kauai.

LY: Kauai, yup.

HY: We met at...

LY: We met in Ann Arbor.

EG: Oh.

LY: Yeah, we both went to Michigan.

EG: And met in Ann Arbor.

LY: And met in Ann Arbor.

HY: Yeah, she's from north Hawaii and I'm from south Hawaii, so...

LY: Yeah.

EG: Meet in Michigan.

HY: Yeah, meet out there.

LY: Michigan. Yeah, do you know that area?

EG: No, no.

LY: It was a good place to go. My eldest brother also went there and my, our younger, I mean, our daughter also did graduate work there.

EG: Okay.

LY: So, it's become kind of a family...

EG: It's a big campus, is that correct?

LY: It was, at that time, we thought, you know, because University of Hawaii was so small. Everything here, Hawaii was so different. I was just thinking about the beginning of this lab, how Hawaiian it was, really, I don't know if Heeny would agree--

HY: Well...

LY: --but the sensibility was really, you want to talk about the social.

EG: Yeah.

HY: You've been to the Dole Street Lab.

EG: Yes.

HY: You know, from Dole Street, from University Avenue, to the lab, on one side was some, a few university buildings. On the opposite side of the street were green onion farms.

EG: Oh wow.

HY: It wasn't even paved.

EG: No more.

LY: It was really a different place. The beginning of this lab, to me, is a story that needs to be told. It's a, really, you know, it's a, very Hawaiian to me, you know? And here comes people like Dr. Sette who's so wonderful, and you know, these people come, and all the, I remember the, so many of the, in those days so many of the biologists who came from the mainland had to be introduced to *sashimi*, because, ooh, it was really horrible, you know, at first, really...

EG: Raw fish!

LY: And they had to be introduced, we took them to Hanauma, you know, to get used to the swimming...

HY: Sashimi and poi.

LY: Oh yeah.

HY: Two things.

LY: And some people would say, "finally, I can get used to poi and it's time to leave", you know.

HY: The, what, two-year contracts.

LY: Yeah. We had many different kinds of people coming because it was so new, you know, Hawaii was so new to everybody, except us, so it was very Hawaiian, I think, you know, even the kind of social relationships, to me, it was, you know, it was a very friendly. For us, for Heeny, who started out picking plankton as a grad student, and then getting hired, and I remember we got married right after I returned back from Michigan, he had been here a year, he had just gotten a full-time job, you know, so we had... The people, to me the people were, they were, I didn't feel any, we didn't feel any social barriers between the, you know, managerial and so on. It was a, we were in the same, Heeny was in the same carpools, and, because we lived in Lanikai, and, you know, so...

EG: Oh you lived Lanikai side?, so, oh...

LY: Yeah. For 50 years. Over 50 years.

EG: Oh. So you drove over the Pali every day?

LY: Yeah. And so Heeny had a kind of unique position because many of the people lived, I mean not, some of the people who worked at the lab lived there. Many of, most of them lived in town, but they formed a carpool with university people, and...

HY: And the carpool was, I remember one time McKernon, what was his first name? Doug?

LY: He was the lab Director, Bill Royce was in your carpool...

HY: He was one of the Directors.

LY: Yeah.

HY: I mean, he was the Director when he was working there.

LY: Yeah, so.

EG: The first Director? No, that was...

LY: No, the first Director was Dr. Sette.

EG: Sette.

LY: Yeah.

EG: Now wait, this all started at Pearl, right?

LY: No.

EG: Are you saying that things started at Pearl Harbor, the original group? The original group started at Pearl Harbor and then went to...

HY: Uh, yeah, Sette was the boss then.

EG: At Pearl Harbor, yeah.

HY: After I came in, even forgot the guy who hired me, but we had a succession of Directors, McKernon was one.

LY: Garth Murphy.

HY: I think...Vernon Brock

LY: Oh yeah, Jack Mar, see, okay...

HY: Vernon Brock used to be the Director of State[of Hawaii] Fish and Game, and he moved over, my first year of university, he got hired. And he was only there a short time and he was asked to go to Washington.

LY: So in the beginning, the beginning, beginning for Heeny, we were newlyweds, we were living in Lanikai, and also living in Lanikai, not Lanikai, in Kailua, were Bill Royce, Bill and Mary Royce, and Jack and, Jack Marr, so they were, and, and McKernon, so they were kind of all in a carpool, you know? It was really, very...

HY: It seems like, those were the days, you know. When you got married you were on the next cruise out.

LY: That was always what they said. How long were you in the...

HY: Looking back, you know, the scientists, I think, we were out to sea about a third of the year, we took turns, even if it's not concerned with our project. Everybody had to go, take, do their share of...

LY: So for us...

HY: And you know, looking back, all those, all that time we spent at sea. Nowadays, they don't even need to have a ship, they have a satellite getting all the same data.

LY: But coming back, I don't know what kind of questions you have, you know.

EG: Well, this is perfect.

LY: Oh yeah?

EG: Just trying to think about the original--

LY: Okay.

EG: --the history of...

LY: Okay, the tone of the place was what I was thinking about. Because it was always a, a friendly, um, tone, it was, I didn't have the feeling of, this is higher echelon, and these are the lowly beginning scientists, you know, and then these are the technicians, you know. We didn't have that. But, of course, we happened to live on the windward side and many others did so that Jack, I mean, Andy Dizon, now Jeff Polovina and, who's the guy who married the Swedish, you know, Jack, Izzy Jones, these are all names from the past who we were very close to, you know? And they lived on the windward side, so it happens that, well, as I say, many of the like, the managerial level people also lived on the windward side, but it was a easy, easy relationship. And Heeny will have to have a chance to talk, but I just want to say one thing, Dr. Sette, I think, in my opinion, he may differ, but I think he set the tone, you know, to me, because I was impressed by this organization. See, I'm a social worker working in, you know, another place, but this organization had such a, to me, academic freedom, you know? And encouragement. Gosh, you know, this, whether it was Dr. Sette, or who it was, but from the very, at the very beginning they had weekly seminars with the graduate students from the university. They came to the lab and the, any of the people, like Heeny did, wanted

to take a course, they were allowed time to take that course, you know. It was the interflow of the academia and the scientific research lab was very, um, what's the word, very congenial, very cooperative, you know. And, in fact, two of the professors became Directors, you know.

HY: Once a week we had seminars, which was, the university graduate students could attend them for credit and all of that. It was mostly related to our work. However, we also had guests that would talk about anthropology or something like that, just to meet the rest of the scientific community and what they were doing.

LY: Anyway, it was a, encouraging place. They, I felt like they encouraged the workers to do their best. I just really had a good feeling about the place, you know, yeah. It was a healthy.

EG: So it started in 1951? 1951?

LY: We were married in '51, he was, that was his, he had already started. We were married in 1951 and he had started working in his graduate school years as a plankton picker, you know. So, it was before 1951. Do you know, Heeny?

HY: What's that?

LY: What year did they start?

HY: Well, I was telling him, they were working in Pearl Harbor...

LY: When?

HY: About two years...

LY: Before the lab was built.

HY: Before the Dole Street lab was built, and it was just finished when I started school there, so, '49 or...

EG: Just after the war, just after...

LY: That's right, that's right.

HY: The ships were still at Pearl Harbor, but the office had moved to be close to the university.

LY: I was, we were in Michigan from '45 to '51 for me, you know, so, and he was, he came home earlier.

HY: Yeah, we...

LY: The place was different--

HY: We were the first people to keep a--

LY: --Hawaii was different.

HY: --tuna alive in captivity.

EG: At Kewalo?

HY: At Kewalo.

EG: Kewalo.

HY: Gene, Eugene Nakamura was in charge of that project.

LY: That was later, right?

HY: Yeah.

LY: Because, you know, I think what was unique, myself, you know, about the lab was its Hawaiianess. It was very influenced, I think, by where it was. People here are different, especially at that time. They've changed, now they've become much more like the mainland, but it was different. And I think that, you know, thinking back, I think that Dr. Tester and Dr., who's the other one at the University, were very influential too in getting local--

HY: Tester.

LY: --local scientists employed. Because I think they really were boosting the local, locally graduated, you know, people. I don't know. This is all speculation. I just feel, kind of a, it was a nice Hawaiian place.

HY: Well, we picked up a lot of people from the mainland too.

LY: Yeah, we did, that was wonderful, it was a mix, you know. Yeah.

EG: Heeny said that folks would break out with a luau anytime.

LY: Oh yes. Yes. And when they did a luau, they really did it.

HY: No big deal for them.

LY: There has not, there has been nothing like that in the last, I don't know, twenty years or so. But at, you know, at the beginning, and, or, it might be a big luau or it might be a whole side of beef would be put on a spit, you know. But yeah. It was a, kind of, the whole community was much closer. You knew everybody, you know?

HY: But also in the, oh I forgot his name, John, John... who was my supervisor at one point?

LY: Who?

HY: John...

LY: Oh, Magnuson?

HY: Yeah John Magnuson. He came over and he says, "you know, my classmates, my associates on the mainland, he says, why are you going to Hawaii, you're just going to get lost there? Nobody knows about them." And he came and he says, "no, you know, I should let them know that this is a respectable place."

LY: We had some good people here. And the, also there were close relationships, I think with the Seattle lab and the San Diego lab, because Heeny did work, you know, it was...

HY: We were part of the San Diego lab.

LY: Yup, part of the San Diego lab, and, because he did papers with people in Seattle and San Diego, you know, so there was a nice interchange with the mainland, so it was good for Hawaii, but I think that, I think that...

HY: Yeah, Hawaii has a reputation as being a playground.

EG: Yeah.

LY: Why did you say that?

HY: Because it does.

LY: I know but why, how does it relate to the fish a...?

HY: I was just telling him that when Magnuson came over, his associates in the mainland says, "why are you going out to that out of the way place, you know, that's to play, not to work!"

LY: I think a lot of good work was done, you know, here. I do.

HY: Yeah, when we were at the meetings we find a lot of . . .

LY: That's what he always said, you know, people seem to think highly of the lab.

EG: So you were born... Kapa'a, on Kaua'i, what year?

LY: 1927. A long time ago.

EG: Ah. My parents were born in '29, so.

LY: You, who?

EG: My mother was...

LY: Oh really? Is she living?

EG: Yes.

LY: I see.

EG: My father's passed, but...

HY: We're old enough to be your parents.

EG: That's right.

HY: No, maybe we're young enough to be your parents.

EG: That's right. And you were born in Hilo.

HY: Yeah.

EG: What year was that?

HY: '26.

EG: '26, okay, yeah. Did, did you grow up fishing over there? Did you do any fishing growing up? Or just being in Hilo would be... yeah.

HY: Well, as kids we used to go fishing--

LY: You did.

HY: --quite a bit. One favorite spot was at the mouth of Wailuku River--

EG: Wailuku.

HY: --under the train bridge. They...

LY: What kind of fishing did you do?

HY: Oh, we took *papio*...

LY: No, I mean, was it spear fishing?

HY: No, no, no.

LY: Yeah, okay.

EG: so, *papio*?

HY: Yeah, whatever was there. It was seasonal.

LY: So a lot of the fish, when you say fishing, like my brothers went fishing but they did spear fishing, you know, so it's different.

EG: On windward Kaua'i.

LY: This was Kapa'a, Kapa'a, lots of fish.

EG: Uh, Kealia?

LY: No, we're right on the beach in Kapa'a.

EG: Okay.

HY: Those, they spear fishing. We didn't have facemasks, they had goggles.

LY: Yeah.

HY: Bamboo with, I don't now what they put in...

LY: Fishing for...

HY: ...you go down deep, boy, that thing pushes your eyes . . .

LY: Fishing for octopus

EG: Good octopus Kapa'aside.

LY: Yes, oh I put it on, on the charcoal and [?], oh, just like, tough lobster.

EG: Now Hilo was where the ika-shibi fleet was, yeah?

LY: Your ika-shibi project, Heeny.

HY: Oh, how did that get started? I was doing some research on economics, you know, how, how much fishermen were making, different times of the year from different places. And found out that, oh, the Hilo fishermen are doing very well.

EG: Yeah, yeah.

HY: And what had happened was that they used to go fishing for squid, *ika*, is...

EG: Ika is squid.

LY: Ika

HY: Lots of nice squid there. And, oh I don't know, I forgot.

EG: Yeah, I think that there were...

HY: I don't know how some squid fishermen caught tuna...

EG: Yeah, yeah, they were fishing for ika, and coming up, the tuna were getting the bait, the ika.

HY: And they found out, they could catch a lot of *ahi*, yellowfin and bigeye, mostly yellow fin. And come New Year's time, you know, they could make a lot of money just catching a few big ones you'd get, you know, \$15, \$20 a pound. And...

EG: At Suisan, Suisan market?

HY: Yeah. Oh, there was a reason why... they tried to catch ahi and were successful.

EG: I know they used lights--

HY: And the ahi they caught--

EG: --underwater lights, yeah.

HY: --on, on, on their handlines were better shape than the longline catch because they hauled it up pretty fast. But they did have problems.

EG: Close to shore too, not too far out.

HY: Well, yes, the answer is yes, and there were certain spots. When I look at the, uh, I'm forgetting the language, the contour of the bottom, could spot similarities. Like there was an underwater bay that was up at Pepeekeo, there was one down by Puna. There was another place, they were the favorite spots.

EG: Koa. Koa? Koa?

HY: Huh?

EG: Like a koa, underwater reef . . . a mound?

HY: I don't know what was at the bottom, but the, the, there was like a little bay underwater.

LY: Did you write a paper? Did you write a paper on ika-shibi?

HY: Yeah, yeah.

LY: I thought you did. What was it?

HY: I forgot now.

EG: I've read it, it's excellent.

LY: Oh you did? Oh.

HY: I retired--

LY: Because I was wondering what he got out of that.

HY: --in 1981.

EG: '81? You retired in '81.

LY: Yeah. I remember that through all the years that Heeny was, you know, working, and they had three research vessels, and they got to know each other so well because they were out at sea so long. And, but they always had the reputation, they had on the, on ship the scientific staff and the technical staff. And they had fishermen. And the reputation of the fishermen here is the best fishermen come from Miloli'i.

HY: Yeah we talked about that.

LY: Oh you did? Oh yeah. So...

EG: Keep going.

LY: Yeah, so, we, we did go and visit many times...

EG: Miloli'i is a small village on West Hawaii.

LY: It's, it's unfortunately it's getting changed with people moving in. But it always was, you know, it was like, you, the highway's way up here, you have to drive down to the ocean and here's this, just through grass and trees and so on. Finally, it comes to the village. It's just perfect. And very, very placid place and you can just imagine the life is unchanged, you know, people going out, and they would have stories. Heeny would come back with stories about how the fishermen would know, would be, um, tending to certain fish to keep them going. So that... the reason I'm saying this is because I get so connected with how Hawaiian it was at the beginning, you know. This is the unique thing about this lab as compared to the wonderful lab in, you know, in, what's the one by Cape Cod, um...

EG: Woods Hole?

LY: Woods Hole and the wonderful one in this place... Hawaii is unique in that way. It's very Hawaiian, you know? I think.

HY: But the first objective of the lab was exploratory to find the resources, which they had planned very well because it tied into oceanography with the, and we did find a reason why there's this rich belt of plankton here, and look what, lots of fish there. And then, then we went into how do we make use of it? Most of, a lot of people were longline fishing and that's a kind of primitive way to catch fish, you know. If you catch, if you lay down a hundred hooks and you catch six fish, you're doing well. So, I never thought that the, uh, overfishing problem with that kind of catch, because the fishermen go broke before they can... they needed a lot of fish out there. But then came the purse seiners, but then we all went into the, the later part of, of my time there with other things around, was looking for other things, other, and we found some shrimp beds that were promising, and . . . Oh, I ended up, you know the sport fishing lobby in Washington, on the mainland is very strong, so every lab had to have a sport fishing section. And one day the boss says, "how would you like to take over that?" I said, "okay, you know, I can do"... So, I called up Washington sport fishing, "what are the goals?" and so forth. Says, "well, we don't really have any." I says, "oh good. I can do what I want." So, I tried to collect more data on the biology of the big fish, because it's hard to get information on the marlins and sharks, whatever.

LY: Do you remember what year that was?

HY: What?

LY: Do you remember what year that was?

HY: Uh, I don't know, I was at it for about four or five years.

LY: Well that...

HY: What, what I also added was a... public relations, sort of. You know, I, I would attend fishing club meetings...

LY: But Heeny, I think he's interested in the history of the lab.

EG: Oh no, this is good.

LY: This is okay?

EG: Sure, oh yeah, yeah.

LY: Okay, all right.

EG: Wonderful.

HY: So I used to, they all, when they had meetings they were always looking for a speaker, so I'd go and give slideshows and biology growth rates, food, and all that stuff...

LY: Can I give you some background, Heeny? Because what happened that Heeny had the time to do this, was his project, he was going out alone on this project with this open ocean behavior studies of the tuna. And he had it all plotted, it was even, and he was working with, um, people in San Diego with electronic, we became close friends with them because they were working very close with sonar gear and so on. He was doing all this technical kind of stuff for expanding research at that time...

HY: Oh yeah, it was, how to make use of the--

LY: Yeah, he's kind of forgotten.

HY: --how to exploit the--

EG: Right.

HY: --the resources that we found.

EG: So, the development of the fishery.

LY: Yeah, so he was, he was, I mean, going on this.

HY: So, I was studying the behavior.

LY: And in fact, he was even had been working on plans for satellite tracking, you know. This was, this was, this was all going on, and he's now focused on the last years of his work, but before his last years, the lab was really actively working like this. Then came Nixon and they lost all their research vessels. They had, from three research vessels, they had zero. All the projects were stopped, you know, you had to work on the data that they had already collected--

EG: Oh.

LY: --they, they shared ships with the San Diego lab, and his project was completely...

EG: So early '70s or so.

LY: I can't remember the date.

EG: Yeah, somewhere in there [during the Nixon administration].

LY: But what happened then was that there he was, it was like, here he was working an idea and then the bottom caved. So that's how he went into this. They, they actually, I guess, found a niche for him in, in the sport fishing, and he made something of it, you know, in fact, he, he started something which is really, turned out to be something that they wanted to continue. And, in fact, the international fishermen that came wanted to duplicate what he was doing. So they first, first contingent from New Zealand, but also private sponsorship, wanted him to go to New Zealand. The government wouldn't pay for it, but they gave him the time to do it, a week to do it, and they took him over there because they wanted to model, him to model what could be done for sports fishermen when they bring in the catch. This could be valuable research material. So, he went there, and then the second year they sent for him again, you know, I mean, this is a bunch of private, the second time it was private individuals from New Zealand, you know, they were pocketing [providing] his expenses to go there. Mine too. [laughs]

EG: Oh, you went. Was this Auckland?

LY: We went to--

HY: The first time...

LY: --big islands.

EG: Okay. The north.

LY: The first time it was an actor who...

HY: We still back on other projects, one was studying behavior which was also migrations and stuff like that.

EG: Tuna.

HY: The weather service was going to put up a satellite, and invited--

LY: It was really...kind of different

HY: --a chance so I can, first, what did we have to do first, we had to find out how to get the information from the fish. So tag 'em. Then you had to have a surface station; the signal cannot go from the water through the air, you have to go to the surface and then--

EG: Pick it up

HY: --relay. So it, it had to, sort of build an automatic tracking system.

EG: This was early tagging work.

LY: Yeah what, what, what I know is that...

HY: And, and we, I forget, if we're lucky and we really work hard, in three years, they were going to put the satellite up in three years, you know, maybe it can do it. So, I submitted that program. Never heard from Washington. About a year and a half later, it's just, okay, why don't you go ahead and do that. It's too late. [laughs]

LY: Yeah...

HY: Missed our chance for it.

LY: So...

HY: Because there's some big problems that required luck and all that...

LY: This is a...

HY: I was just thinking about...

LY: This is a kind of prime example of how politics entered into this research thing. Because they were going full gun, going full blast and very optimistic, just going ahead...

EG: Making advances.

LY: Yeah. And then it dropped completely. You know, all three ships were gone. All the people working on the ships were dismissed.

EG: Do you remember why?

LY: Yeah, budget cut, you know, huge budget cut from Washington, and the way to cut the budget was to let go of the ships. And it was really drastic, you know. But, so, in terms of what I could see of his career, yeah, I actually see it in him too, you know, kind of a drop, you know. It was really high gear and enthusiasm and optimism, and, you know, going, and then that political decision was very drastic. I think it was very drastic. And they, I don't know how long it took to overcome it, you know, but it was really something. The...

HY: I don't know, if you look at the national budget, every time there's a new President you get shot off and then you've got to build up again.

EG: Redirected.

LY: But that was the most drastic.

EG: And that was the Nixon administration?

LY: Yeah.

HY: But, uh, yeah, we, we had a, we went to places where nobody else went to. The, the National Weather Service always gave us work to do. You're going to be there, we never got data from that, so. You know, we, and the weather reports twice a day.

EG: From Northwestern Hawaiian islands? Up north?

HY: The whole Pacific. That meant some, with the changing time periods, sometimes you got to get up at 2:00 in the morning just to make a report to the Weather Service.

LY: They were so far...

HY: But, but we appreciate, appreciative, because we were getting this information that, their, their side is like, if we spot bad weather and your ship is there, you know, get out of there or something.

EG: Did you communicate by radio? Radio?

[background voices]

HY: Yeah, radio. We had a radio man, in fact, a couple of those guys were, could do Morse Code, still. That's how ancient we are. Oh, and, this is scientific, we had to be as exact as we could where we were.

EG: Position.

HY: So the navigators, the rule was you take five readings. Most of the time if there three, you say yeah, yeah...

EG: Triangulate.

HY: They went out five readings before... And I used to think, they had this chronometer that cost about a thousand dollars.

EG: Chronometer.

HY: Just a clock. And supposed to be super sensitive, and always, every day, calibrating with the time signal and with the radio. You were twenty seconds off one day, and then you get a..., a lot of times the, what's that...

EG: Digital...

HY: Some kind of a watch.

LY: Do you have a cracker? These are really good, I think, breakfast crackers.

HY: And you get like one part per million accuracy.

EG: Oh right, on a, on a watch.

HY: Two seconds.

EG: Things have really changed.

HY: For ten dollars.

LY: Were you interested in the social part of the...

EG: Sure, oh yeah.

LY: Heeny, talk about what it was like working in that lab, and the associations there. Because it, it was, tell him about it, you've got a lot to say.

HY: I, I think I mentioned that we had sports between the ship and the office personnel, like volleyball, softball, or. There was, the, the lab had an employee's organization and that thing was set up. And we had parties pretty often.

EG: Like Friday afternoon parties? Friday afternoon kind of thing?

LY: Was it Friday afternoon?

HY: No, no, I mean, you know...

EG: Whenever.

LY: After work?

HY: Yeah, after work, somebody would say, oh, time of a party, so Saturday or Sunday, or whatever.

EG: Okay.

LY: Heeny once was on a British, um, research vessel. And he came back and talked about how different it was. The segregation of officers and--

HY: Yeah.

LY: --and scientists from the crew. In their ships, they would all mingle together, you know, it was just very, uh, American, democracy, you know, really.

HY: We did have some, the skipper always sat on one place...

LY: Oh yeah, the skipper really...

HY: And the few chiefs had a seat--

LY: Yeah.

HY: --but everybody eat together.

LY: But he did have his authority and they listened to him, and, you know, there was all that. But the, the stories that I hear, you know, it's just really, very, American, if you want to say, as contrast to the British, you know, segregation, you know.

EG: More formal.

LY: Yeah.

HY: Our ships were smaller, too.

LY: Yeah.

HY: Smaller crew, you can put them all...

LY: So they got to know everybody's life histories. When Heeny was, when Heeny was, they would be, you were talking about how far they went? They were so far out that when the most, two most, this is on a personal level, two most personally, um, tragic things happened in our lives, his mother died, and our baby, you know, like a month later, had to have surgery, those, both times he couldn't come back.

EG: Oh.

LY: Normally, you know, it, for, they tried to bring you back. But he was so far away, to get to the island where they could fly him would, you know, so, that's how far they went. You know, yeah.

HY: Yeah. Another thing, when the... foreign fisheries ships came in, we would set off our boats out of sight because they, they used to be, theirs used to be a lot fancier.

LY: Oh really?

HY: Yeah. The Japanese boat, research ship comes in, you never saw the *Gilbert* or *Cromwell*. [laughs]

LY: Oh yeah? Their ship was fancier?

HY: Huh?

LY: Their ship was fancier?

HY: Yeah.

LY: Really?

HY: Bigger.

EG: Bigger.

HY: Yeah, our ships were pretty small.

EG: Where did you go? How far? Where were those places that were so far?

HY: We, we covered pretty much the whole Pacific Ocean.

LY: Well, name some places.

HY: Off the central Pacific Ocean, as far as Aleutian Islands, Alaska; as south as Solomon Islands. We went to Saipan, and--

LY: We have pictures.

HY: --as far east as Mexico.

LY: Yeah.

HY: It was a very--

LY: But we have...

HY: --very broad...

EG: Did you put into port up in the Aleutians . . . put into port?

HY: Uh, depends. If there was a port. [laughs] One time I went out to sea for 56 days, and the only island I saw was Oahu as we left and as we came back.

EG: Wow.

HY: But you get a different perspective of the universe when you just see horizon every day.

EG: Stars at night.

LY: So, the pictures we would get would be a thin line and, because they'd been at sea so long, that was the, thin line was an island.

EG: Land ho.

LY: Yeah. But we have other pictures of, um, not too many, but, of the natives and there are native, they're Melanesians, or whatever, so they landed into places where, where only yachtsmen maybe went, but even few of those, and yeah, but, yeah.

HY: I found out that of the different people, Polynesians were the friendliest.

LY: They [the scientists] were always goodwill ambassadors. They would have big fish to give them, and the people would give them small fish, you know, because they had all this big fish. So it was a very nice goodwill kind of thing too.

HY: Yeah. And you'd read a lot of novels about the Pacific. They come up with this friendly Polynesians. You remember the book *Hawaii*, the Spanish going to the Marquesas islands and the people would come out in the canoes, they'd be shooting at them. I mean, the Spanish would be shooting.

LY: The Spaniards were shooting the? ...

HY: Yeah.

LY: Oh my God. Well, these were the opposite. When, so...

EG: Where was your favorite place in the Pacific?

HY: Uh, I, I don't know. It depends. It's kind of different. But most of them, at a certain period, there was a couple of years that we always had this one ship bound between here and Tahiti. The, uh, Society Islands and the... what's the other place...

EG: Tuamotu? Tuamotu?

HY: North of Tuamotu. It's another group there. More like our islands. Volcanic origins.

EG: Marquesas? Marquesas?

HY: Huh?

EG: Marquesas?

HY: Yeah, Marquesas.

EG: Those are high.

HY: A lot of them [islands in the Pacific] are just coral atolls. Because the mountains have sunken already. But these others are more like Hawaii. And, you know, the, if you go to Marquesas and talk about their language, this is, the southern Marquesas people talk a different language from the northern Marquesas people. But they both understand each other. And the Hawaiian crew members that grew up...

EG: Are you talking about the Marshall Islands? Marshall Islands?

HY: Marquesas.

HY: Marshall?

LY: Marshall or Marquesas?

HY: Marquesas.

EG: Okay, okay.

HY: Uh, the people who had their apprenticeship at Miloli'i, they can talk to the...

EG: Ahhh . . .

LY: They Hawaiian?

HY: I mean, I dunno . . they talk and they can understand each other.

LY: Really?

HY: Because there's enough words that...

EG: They're Polynesians.

LY: Polynesian.

EG: Did you get to Samoa? Samoa?

HY: I, I stopped in Samoa a couple of times.

LY: And he has a funny story. [laugh] About one day, oh my gosh, two, two stories about one day...

HY: We had to, ah, talk about new fishing rules about every year. So, Doug Gates was set out to, he worked a different section over here, the more police section. And he was sent out to give a talk and I was asked to go along with him, just observer. And we landed at like 4:00 in the morning and we were due out about, about midnight. So, anyway, they got this meeting together. All the Samoans came in, and they explained about [unintelligible], he was the young man who was in charge of the, like the chairman, he started the meeting, he turned it over to Doug Gates, and so as Gates was talking, Henry passes him a note. Oh, I forgot the guy's name, he says, oh, Henry just passed me this note, saying that Mr. So-and-so, your representative to the American Congress just walked in so I want to welcome him. And, so we had this meeting and it's over. Henry said, wow, you know what you did? You mispronounced the representative's name. You called him a Mr. Masturbator.

[all laugh]

LY: And the other story is...

HY: And the thing is, that's amazing, nobody in that audience laughed or giggled, all serious.

LY: And the other story is a story on Heeny, because they were there for only 24 hours.

HY: Less than twenty-four.

LY: Less than 24 hours. And so he, he was young but, you know, he wanted to take advantage of duty free...

HY: Booze.

LY: Two bottles of booze. So he bought two bottles of booze, and he, so he went through customs, and the customs guy here said, "you were there less than twenty-four hours, weren't you?" You know, to try to help him.

HY: More than twenty-four hours.

LY: What?

HY: Oh, he was, he was trying to get me to say I was there for *more* than twenty-four hours.

LY: Oh, I see. Okay. Whatever it was, he was feeding him an answer that would allow him to bring the booze in duty free. But he, he was so honest, [laughs] and he said, so he had to pay duty. And then when he opened his suitcase, both bottles were broken. [laughs] So that was really, funny joke on him.

HY: Yeah. We go to Micronesia, we get off the ship people stare at you but nobody, nobody comes to say hello.

LY: Really?

HY: In Polynesia, they come on board the ship, waiting for you.

LY: They don't only come on, they prepare a feast, you know.

HY: Yeah. A couple of places they even throw rocks at you.

EG: Whoa.

HY: I forgot the name of it, but this place was no, the economy was so bad that they had the, the biggest suicide, uh, record. So it was pretty bad.

LY: Did you want to hear about the other people who, you know, worked at that time? You should talk about the other people, you know, who worked, in the beginning, Garth Murphy, all these people, Bill Royce, um, uh, who's that wonderful person who ended up, they lived in Kailua so I'm, ended up doing a grape...

HY: Yeah, Richard Shomura and Gene Nakamura...

LY: Yeah, Gene Nakamura, Rich Shomura, um, Garth Murphy and Stella Murphy, and who's the person who ended up in California, lived in Kailua, I forgot the name, wonderful people. They lived, um, they were, they were close friends and I can't think of the name.

HY: Oh, oh, oh, Jack Marr.

LY: Jack Marr, you know, I don't know if you know these names. But these were, oh Bill Royce, Bill and Mary Royce were really wonderful people in the early years. So encouraging to Heeny, too, you know? They were really, um, big people in our lives, the early years.

EG: Had they, did they start in Hawaii, or did they come from--

LY: They came from, their careers there, they were established [on the mainland], and they came as--

EG: --to Hawaii?

LY: --to Hawaii, as very senior people, you know? And, um, so, we, we just happened to live in that same area. They lived in Kailua, we lived in Lanikai, so our social relations, right now we still have, have them too, we, well, uh, after retirement, we have--

HY: Most of them have left.

LY: --over thirty-year relationship with two people who were at the lab, you know, because we met once a week for dinners, yeah. And one of them has gone back to, retired and gone back to San Diego, and, and Wisconsin, the other one is still here, you know, but, you know, the friendships from the, you know...

EG: So, work and social life were closely related.

LY: Yeah, yeah, yeah. It was. Of course, you couldn't find a better bunch of people. And we traveled a lot with Gene Nakamura who's over at Panama City, you know. Even though he left and he wanted Heeny to come along there too, but, you know, so.

HY: But, but the key to it all was... every now and then they asked you how about going to Washington, D.C.?, you know, for a year or something like that. And I always turned it down.

EG: I was about to ask...

LY: No, he didn't want administration.

HY: So, that was a stepping stone I could've...

LY: The other thing was...

HY: Because I always figured, you do that and you go and do, end up doing administrative work which, you don't really like, you know, so I never accepted.

EG: So you really like science.

HY: Yeah.

LY: But in the early years, yeah, Richard Shomura, and Gene Nakamura, we were all very close. And they both went, you know. The other thing is that Hawaii attracted a lot of foreign marine biologists, so we got acquainted not only with the people working there but with foreign ones, you know?

HY: Yeah, they were on sabbatical, and . . .

EG: Japan, Japanese?

HY: And they come, they come to our lab to work for a year or something like that.

LY: Yeah.

EG: Folks from Japan?

LY: From Japan, that was from Hokkaido University.

EG: Okay.

LY: Yeah, um, Dr. um, oh he was so wonderful. Dr...

HY: There was a Canadian guy-

LY: Motoda. Dr. Motoda.

HY: --that was entomologist...

LY: Oh, and we...

EG: Entomologist.

HY: Huh?

EG: Entomologist?

HY: From Canada. And I said, oh that guy must have been pretty, uh, impressive to, to get a, excuse to come to a fishery lab, here's this entomologist.

LY: And another lasting friendship for us is a scientist who came to Hawaii from Lowestoft, England, and they actually did a paper together, you know? And, yeah, they visited us, we visited them, you know, so they, there's international as well as local, you know, local, it was...

HY: A lot of visitors.

LY: Yeah.

HY: There was a visitor once from Taiwan, and, uh, turns out he had the same last name that I did. See, in Chinese, it's real tricky, they have hundreds of dialects. Depending on what dialect you're speaking, my name sounds, Yuen sounds different. You know, it's Yen, Ian, Yuuan, whatever. And this guy came and, so I said, oh, write it down on the board. We had the same last name. But, uh, yeah, we had a lot of visitors.

LY: I'm sorry, I steered us in that direction, but...

EG: No, no, that's good. What, what are your backgrounds, your parents and grandparents?

HY: My, my grandparents came over.

LY: From?

HY: From China.

LY: Southern China.

HY: Southern China, yes. The thing is, last year, somebody brings up a question like that. I always say my grandfather came over. And now it's not, my father's father, and last year, that's crazy, all your grandparents came over. Your mother's mother, your father's father. And, uh, my, uh, on my mother's side, uh, they must have come for sugar work, but--

LY: We've don't know that.

HY: --but I never met my grandparents that side. Oh my grandmother, but she didn't, my mother talked about being born in Pa'ia, Maui, and then moving up to Kula as farmers.

LY: His grandfather had...

HY: And, and, uh, she says, those days, they never sent the girls to school, they sent the boys to school. So she never went to school. And just talked about how the farming...

EG: Kula, Kula.

HY: Like the big tree, and they get, they get in there, put all their kids and they go over and farm, and the mother take turn so one of my mother's younger sister was adopted by another family who didn't have any children. She went to school.

LY: Excuse me, interruption, adoption is a Hawaiian, a very Hawaiian thin – *hanai* . .

EG:*Hanai*.

LY:Very, very common, you know? It, very, not adoption like we think of in western society, it's much more informal, much more commonplace, you know. And people will say, oh, can I have that, I remember somebody asking for my brother and my mother refusing, you know. Yeah, it's...

HY: Anyway, my mother grew up, married, had children, and I don't know, in those days infant mortality was pretty high, she had young children and her sister who got adopted, they were still friends, she said, oh, why don't you come to school now? So she left her kids with her mother, then went to the Maunaolu Seminary in, on Maui, it was a boarding school. And she got through fourth grade. And my father, on the other hand, there was a big, he... I never talked with my parents very much about what life was like for them. Grandpa had a rice mill in Hanapepe, Maui...

EG: Hanapepe?

LY: Kauai.

HY: Kauai. I know my father said he was kicked by a mule once. And, uh, then he went to, he was educated in Hawaii, you know, he grew up here, born here, Hanapepe grew up, and . . . So when I knew him . . . Oh, I was the result of my father's second marriage and my mother's second marriage. They were both widows. Anyway, he, he was very Chinese, you know. Like, if you're Chinese you're capable of doing this or doing that, you know. You're more capable than anybody else, kind of thing. Very chauvinist, actually. He, he used to be one of the scribes, people that used to write letters in Chinese for people who, illiterate people who wanted to write letters home to China, he was the guy that wrote the letters. And some young married people wanted a middle Chinese name, how they named the Chinese name and the, they would come to my father and ask for lists or something like that.

EG: To, did they have a form they had to fill out?

HY: Yeah, and, uh, he spoke English fine and he would even write Chinese poetry, some Chinese...

LY: I'd say he's in the tradition of the, of the old tradition of Chinese literate people, write poetry, you know, and...

EG: Intellectual.

LY: Yeah, intellectual, that's what his father was, yeah.

HY: And then later on in my life...well, my father had died already. Oh how come Dad was so Chinese, you know, he grew up here and everything? Most of the, you know, you grow up here you don't even know Chinese. I know, I hardly know any Chinese.

LY: He doesn't know any

HY: I happened to meet, my first year at the University of Hawaii, I happened to meet this fellow who, from the first meeting he asked me all kinds of questions about my family. And I'm thinking, is this guy a snob, he only wants to play with certain families, you know. [laughs] So I asked the person who introduced us. He says, oh no, no, he has this hypothesis that everybody in Hawaii is related. That's why he asks all these questions about family and tracing... So a couple days later, he calls me up and he asked me one question, and he, he says, when I answered it he says, you know, my grandmother and his grandfather were siblings.

LY: Yeah.

HY: Small world.

EG: Yeah. Small world. Hawaii.

HY: And he said, when my father's father died, my father took his mother back to China, _____ came back. That's maybe where he picked up on his Chinese.

EG: Yeah, yeah.

LY: There are some remarkable stories in Heeny's family background in Hawaii. And the one I find really, this is so, I don't know, of the times, we have some of these stories too, but his father, his grandfather remarried, I mean, married a second wife, a Hawaiian woman, and they had...

HY: Well, half Hawaiian.

LY: Half Hawaiian woman, and they had children, and then both of them died. And so now the children had no parents, they were orphans and the oldest was fifteen, fifteen, and I don't know what, four children. And they were scattered to different relatives. But eventually they said, no, they wanted to get together, they wanted to be together. They got together and they moved to Honolulu. And I don't know how they survived, they did, but two of them ended up, this is in an age that was so long ago. See, when we went to school in the mainland it was still unusual, my big brother, in the '30s, went to the mainland, that was unusual. This was, you know, maybe at that time, I'm not sure what, what era, but two of them, one became a physician, one became a dentist, these orphans, you know? Somehow they made it. And the other, one, of the other four, one of them was a wife of a banker, and the other one was, I'm not sure what they did, worked in a bank also or something.

HY: Dentist.

LY: Huh?

HY: Wife of a dentist.

LY: One was a dentist, one was a doctor, one...

HY: The daughter married a dentist.

LY: Well, anyway, the other one, you know, they all made it. They were orphans, you know?

HY: They had to go to the mainland to get their doctorates.

LY: That, that was an achievement. Even when we went, it was unusual, you know? Because in those days, to make a phone call to the mainland was like five dollars a minute, or something, you know, it was not like it is now. Everything was different, you know? So, when you went to the mainland to school, when I went to the mainland to school, I understood that I would not be able to come back every holiday, you know, I'd be there, and we, we'd plan to spend Christmas there, we'd plan to spend...

EG: It was a commitment, yeah.

LY: Yeah, well, and because it's too far and too expensive, you know? Times were very different. Now, you know, at the crack of anything, they're back and forth, you know?

EG: Were there, did you find other Hawaiians in Ann Arbor?

LY: Uh, yes, thirty of them.

EG: Oh.

LY: The year we went there were thirty. When my, I don't know how many there...

HY: Like two years later there were 300.

LY: Yeah, many, many more, yeah. We went in 1947.

EG: '47.

LY: Yeah. My brother went in the '30s, you know?

EG: To Michigan.

LY: Michigan. Yeah, he went to Michigan too. And so my father was an immigrant.

EG: Yeah, I was going to ask, what, what is your background?

LY: I think it's incredible. I have so many stories of heroic heroism, you know, but my father, uh, lived in Hiroshima, he was born in Hiroshima. And his father was a big, the family history is quite extensive. I have written family history going back centuries, you know, because they owned a castle, they built a temple, so on. But then, by the time my father was born, his father was, was a, they call him, not my father but friends of my parents who knew them at that time tell me his father was a playboy. And the result was that he dissipated a lot of the wealth. My father still owned some property, but all the kids, all these sons moved away. He moved to Hawaii, one moved to Osaka, one went to Korea, you know. He came to Hawaii and he married my mother. My mother was born here on Kauai, and but she was educated on the, in Japan. And she came back as a teenager and because, she was educated in Japan because her mother was actually dying, and so she took her two, two-year-old and four-year-old to be taken care of by the grandmother and she came back and she died. So she, being raised there, and she comes back as a teenager. And I, in the meantime, my grandfather, who I never knew because this was way before I was born, you know, they lived on a farm, their own farm. And, and then by the time my mother was of marriageable age and my father came along and they got married, the family member had restaurant, owned a restaurant that they wanted to leave behind to a family member, because they wanted to go back to retire. They had no children, they wanted to go back to Japan, so they gave it first to another, um, uncle, who didn't do well, so they gave it to my father and mother and that's how they started, you know? And they raised a family of six children, and in the '30s was able to send the, um, their oldest son to Michigan, you know, so it's just, um, you know, and, um, yeah. But the, we have so many stories in, in the family of siblings helping each other, different from the society today, you know? Yeah, siblings, aunties and uncles, you know, just helping each other, yeah. Anyway, that's a time different, you know.

EG: No, very important, I think.

LY: Yeah.

EG: There was more co-op . . . kokua.

LY: Yeah, you know what I think? These stories really form you, you know? They're important, you know? So, I like to tell my kids too, you know, this is your history, you know? It's really...

HY: I just thought of something. In the '60s, who, who was the Director of the Seattle lab? He was from Hilo also.

EG: Ah.

LY: Oh.

HY: Yeah, and he had a brother, a younger brother who was also a fishery biologist within the system.

EG: Interesting.

HY: Yeah, what was his name...

LY: And we also... Yeah, anyway.

HY: I, I remember he, when he was recently here, and we invited him over for dinner, he went and put the children to bed. He went to tell the children their story and put them to bed.

EG: So you folks had kids?

LY: Three kids, yeah. One is an architect in Nova Scotia, one is an artist in New York, and one is a former film editor, not, assistant film editor in Hollywood, but she's not working. She's retired, you know, old and retired. The other two are still working. Nobody here, you know, except the obvious, visiting.

EG: Did you have siblings? Did you have brothers and sisters? Siblings?

HY: Oh, siblings. Yeah, well, I had--

LY: Illustrious ones.

HY: --had, have half-brother and two half-sisters from my father's side, one half-sister from my mother's side, and a full sister, I have a younger sister. My, my, I think my brother was an amazing guy. I first met him when I was maybe, five years old, six years old, because he had been in the tuberculosis sanitarium. Those days the only cure was rest, so you put, they put you away and... Well when he there it was available, but later on they would prepare your chest, collapse your lung to keep your lung rested. And another cure was that they would crush the phrenic nerve, and as the phrenic nerve regenerated, your lungs would pop back into action. But in the meantime they get rested. But anyway, so, four or five years old, and hey, this new guy in the house. And he came on, and he went back to high school as a junior, as I recall. And he was in school politics, he was the manager of the basketball team, and he had a job at the newspaper. But anyway, he became, eventually became, the editor of the newspaper without a college education. That's what really gets me. You know, even in his days, a college education would help. But he was the kind of guy, like, there used to be a quiz show over the radio, it starts with a two dollar question, if you answered that you answer a

four dollar question. He could always answer the sixty-four dollar question. But he wasn't on the show.

EG: Hard to call in.

HY: He was very interested in, uh, governments and things like that. So, the Hilo newspaper was purchased by a mainlander, and he says, uh-oh, he could see the writing on the wall, you know, no college education. But then, uh, Hiram Fong who was a Senator from Hawaii, got elected to Congress. He asked my brother to be one of his aides. So, he left the newspaper.

EG: Did he go to Washington?

HY: Then he went to work in Washington. And he was, he always, he says, this family's known as Dad's a Republican, Mom's a Democrat and the kids are radicals. [laughter] ...So...

[brief interruption in the background]

I used to drink about a dozen cups of coffee a day, and I used to smoke. Then one day I realized, hey, I haven't had coffee in about a month, and I was still smoking. And I never said I was going to stop drinking coffee. Somehow I just stopped.

LY: Ed brought some scones, you want to have coffee with your scone? There's just a little bit left.

HY: That's okay.

LY: Yes or no. Okay. I'm afraid we've strayed the topic so much--

EG: No, no, no.

LY: --and we should focus on what you want.

EG: No, that's good, it's all very--

LY: We're just rambling on.

EG: --how you got to be where you are.

LY: Oh, I tell you, we're very lucky. Very lucky. All our lives we've been lucky, you know?

HY: Yeah, timing, you know, I would say that, boy, you know, I got out of the Army, sixteen week basic training, eighth week of basic training, the bombs are dropping, the war is ended.

LY: Oh, okay, I'm going to take this up.

HY: I definitely had to find out...

LY: Can I take this out? Okay, I'm going to take a piece here.

HY: You know, uh,

LY: Huge.

HY: So, I get out of the Army and I get all this free education.

LY: We've been lucky. Well Heeny, I think we're straying. We should get back to fisheries and the beginning of this lab and the people, the people, all of that contributed to, you know. It was a good lab. And it was good to be, to feel good about your work, you know? Really, I think.

HY: And we, we moved to Lanikai. We were the first ones to move to the other side of the island. People coming to visit us, and they thought they had to bring picnic lunches.

LY: At that time.

EG: I don't know if people will know, but how nice Lanikai is.

LY: At that time, it was wonderful. And our children, except for, well, the oldest one was nine months old when we purchased our first house. The other two were born there.

EG: In Lanikai?

LY: In Lanikai.

EG: So were there many houses over there?

LY: Very few.

EG: Yeah.

LY: And it was, you know, transiting from, well, there were houses, but few and far between. And the beach, you go to take your lunch at the beach and there'd be nobody there but you and your children and your dog, you know? It was really... And we had community luaus that we'd all pitch in and work, you know? And it was a very different society, very, very different. And we were blessed to be able to raise our children there.

HY: The community luaus was to raise money. To take care of the park, the private...

LY: It's a private park, you know?

EG: Kailua Beach Park?

LY: No. Lanikai. The park in Lanikai is owned by Lanikai Association, you know.

HY: And, uh, I mean, it's a private park but nobody is stopping anybody from using it.

LY: Well, in those days, all the residents in their deed was written a private right-of-way to the beach. In those days, until they said no, no, no, and all of the State of Hawaii there are no private beaches. But until then, it was private beach, you know. But of course it changed, and now you don't want to be there.

EG: So Bellows is right around the corner.

LY: Yup. So you don't want to be there now, it's too crowded.

EG: Very crowded.

LY: So we sold our house in one day.

EG: When, um, what year was that?

LY: 2008.

EG: Eight, okay.

HY: The year before 2008 we were already talking about, gee, maybe we should move into town, because they have a lot of activities in town, and it's getting more, more tiresome to get back and drive back at night. And, like, well, gee, we priced things and how are you going to pay for it? And all of a sudden, it sort of dawned on me, well, sell the old place. You don't have to have, own two places.

LY: Our children didn't want it.

HY: Luckily the, uh, the price in Lanikai went zooming up, already.

EG: Yeah, that was peak market time.

LY: Yeah, it was.

HY: And we sold out right then--

EG: Good timing.

HY: --it was at the peak.

LY: And it was because our house, you know, real estate is just a meeting of the seller and the buyer both, you know, it's tense, you know? Because this buyer had looked at everything and people in Lanikai were sitting on their property for eight months, fifteen months, you know, and they were beautiful places. But they came to one open house, and we had four offers, and he was offering cash and more than we asked for, you know?

EG: Perfect.

LY: From Canada. Anyway, we, I don't want to, we should come back to his topic, really. We're rambling too much I'm afraid.

EG: Oh no, this is great.

HY: They, nowadays, you see Lanikai in the news it's always bad news. Traffic jams, and all that stuff.

LY: But it was heaven, you know.

EG: So did you drive around, or go over the Pali to the lab...

LY: To...

EG: Or both.

LY: No, over the Pali.

EG: Always over the Pali...

LY: And Heeny would say...

HY: That was before the tunnels...

LY: And he would always say, when I come home I know I'm home. Because it was, in those days, it was considered far away.

EG: Yeah, yeah. Could you go, in those days could you go through Maunalua Bay, that part? You know, around . . . windward?

LY: You could, you could, but we didn't. We went through...

EG: [unintelligible]

LY: Yeah, the one at Pali. And cars would overturn every so often in the Pali.

HY: Oh the tunnels, you'd never be. This is, there's the place to sightsee, there used to be a bend. But now you go through a tunnel, you avoid that bend. Every now and then they would flip cars over because there was a big updraft right, right at that...

LY: Do you want to talk about, more about the lab? The early days? The early days labs and the associations and the, uh, and the, uh, research, and the, whatever, the people, wonderful people.

HY: Yeah, the, we had good oceanographers too, because they hadn't figured out where all these currents were, where the fish would be--

LY: Oh we had some outstanding ones, oh...

HY: --oh, there was a, the, the countercurrent. There was this guy...

LY: Townsend. Townsend.

HY: An oceanographer--

LY: Townsend, Townsend Cromwell was out here.

HY: --from the mainland...

LY: Big names. From England there was another one...

HY: Yeah...

LY: So, we had, he worked with some really big people

HY: ...he was kind of a bit eccentric guy...

LY: Very nice, very, very...

HY: What was his name?

LY: I can't think of his name.

HY: You probably will see his name in the literature--

LY: Any literature.

HY: --Townsend Cromwell. Townsend Cromwell was--

LY: American.

HY: --an oceanographer, this other guy, he was from, uh--

LY: We'll think of his name. From England.

HY: --a big East Coast university. Anyway, we, when we were out longline fishing, certain places the lines would always get tangled. And this guy, just all these currents going--

EG: Big Island?

HY: --westward, you know...

EG: Kona side?

HY: In the Pacific.

EG: Oh, generally . . . okay...

HY: The whole Pacific Ocean, northeast current, the southeast current, they're both going west.

EG: Convergence.

HY: But one has to come back somewhere. So they, they hypothesized an undercurrent and eventually they ended up describing this current underwater three times as big as the Mississippi River, or something like that. Look it up in the literature and you'll see it. But I, so what we did, what they did, they put up like plankton nets, put as a drag, and then they put

a buoy on top and we followed the buoy. And I remember, I happened to be on the cruise with these guys. First night the, okay, the wind's blowing this way, so put the net down, like a windsock, put it down, and, and the skipper's lining up the ship the same, because the wind's blowing, buoy, net goes down, net, the buoy's going this way against the wind. They finally mapped out the big current.

EG: Was it equa . . . ?

HY: It's called the undercurrent.

EG: Was the first vessel the *Townsend Cromwell*? What were the first vessels?

HY: What were the...

EG: What were the first vessels you were working on?

LY: The names of the vessels you were working on.

HY: Oh, the vessel.

EG: Yeah.

HY: Uh, *Hugh M. Smith*.

LY: Oh that's right, *Hugh M. Smith*.

HY: *John R. Manning, Charles H. Gilbert*

LY: Oh, that's right.

HY: That was, built by our age . . . design. And they says, well, we go into shallow waters a lot, so we'll make it a round bottom, no keel. And they had the ship built on the mainland, and it come back to Hawaii, they decided to have a cruise and these guys are saying, oh man, that thing rolled.

LY: One of the outstanding...

HY: The, uh, it was, you know, shallow, because it went in shallow water. The thing rolls. The deck was maybe two feet higher than the ocean, that low. And, well, the engine room overheats. Well, when it rolls the water rolls in the engine rooms, that's the cooling system. Like that. [laughs]

EG: How long were these?

HY: Uh, 120, maybe? 500 tons? Maybe less than that.

LY: One of the things...

HY: So, we got the engineers, the architects back, and they decided to put the, a fin, eight inches wide, angled like this on the side there. It worked.

EG: No more roll.

HY: Yeah, when you went on the *Cromwell* on those early days, you came back with black and blue elbows. [laughs]

LY: I want to talk about VanKampen One of the, you know--

HY: Oh, yeah.

LY: --interesting and outstanding guys. He was, was he an oceanographer or biologist? Van Kampen? Was he a biologist?

HY: No, he was a, mostly an interpreter type.

LY: Oh he came on, I thought he...

HY: But with a biological background.

LY: Okay. He was from the mainland somewhere, pure *haole*, but he was just incredible, he could learn, you know. So, one story we have is, um, this is, this is kind of dating the time, but this was after the war and the Japanese were still under surveillance by the American government. So, when a Japanese ship went out, they had to have an American observer. So they had used, they have used, they had used, somebody from their lab to be the observer. But in this case, the, the observer needed somebody who could speak Japanese so that he could talk with the people, because he didn't know Japanese, you know? But they got on the ship and these two guys, you know, one is a biologist and one is the interpreter, you know, and the Japanese were so confused because the interpreter is *haole* and the, uh, the scientist is American of Japanese ancestry, couldn't speak Japanese, you know? [laughs] And Van Kampen, of course, was fluent, and oh, he could speak, you know, just elegant Japanese as well as you know, any kind. He was quite, really quite a guy, really, really, you know.

EG: What role did he play in all that?

LY: I don't know, I thought he was, I thought he was a biologist but Heeny says he was an interpreter.

HY: Well, he was actually a linguist, I mean he majored in Japanese.

LY: Yeah, but what did he do in the lab? What did he do in the lab?

HY: He had to know--

LY: Translated?

HY: --biology to...

LY: Oh, to translate?

HY: Yeah.

LY: Oh, I see.

HY: He, he was editor too, so he'd read all the manuscripts.

LY: Very, very, very, very--

HY: He, uh,--

LY: --competent, really competent person, you know. Really great guy.

HY: --he knew all the European languages . . . either Romantic or Germanic...

LY: He was so good.

HY: And one day he says, "well, it looks like Malay is going to be part of the international community, a separate state. Maybe I should learn Malay."

EG: Malay.

HY: So how, what he did is, uh, he subscribed to the newspaper, Malay newspaper. He turned on the shortwave radio at midnight every night to listen to the guy talking Malaysian, that's how he would...

EG: Wow.

HY: He knew Chinese and French and Japanese, well, Japanese and Chinese use the same written, but picks it all up . . . just like that.

LY: The personalities of the people we met--

HY: And he, uh...

LY:--are still in here, very, very, strongly, you know? Like, talk about this society in Hawaii of mixed ethnicity. Well, this was just perfect for Stella Murphy, and she was the most liberal person you could meet, she was a beautiful woman, and she, you know, she just fit into any society. But I remember so much that when they moved away and moved to, I think it was Texas, which was quite racist, you know, you had to associate with a certain kind of people, not with this kind of people. Well, you know, I remember getting a letter from her, really, knowing that she had to move out of that neighborhood because of that, so, Hawaii represented kind of a nice, you know, place for people like her, you know? And of course, we appreciated that, you know? Yeah.

HY: Another name, Gunter Seckel.

LY: Gunter Seckel was another, oh gosh.

HY: He's, he was one of the oceanographers.

LY: Yeah, good friend.

HY: He, his--

LY: From Germany.

HY: --his father escaped--

LY: Escaped.

HY: --from Hitler, and got to be a math professor at the University of Washington

LY: Yeah, at age thirteen, he...

HY: But, but, his children were not as fortunate. They got as far as England, so they got out of Europe-

LY: Germany, Nazi Germany.

HY: --then grew up, got educated in, in England. So, Gunter always had this strong German accent.

LY: He never lost it. He never, never went swimming. He liked to go hiking. He lived here for decades. He married, we were there, we were the first ones to meet his bride from, who came from Switzerland, and she planned, we were, we took our children on a ten-week trip to - what a trip - to Europe when they were fourteen, fifteen, and seventeen. And Gunter's wife, what's her name, they're both are gone now. Anita - planned our Switzerland section. And Francois, who came from Paris, planned our French section. And we, we, these were all associates. And when we went to Italy, Heeny, we met in Rome some, some scientist he had met...

HY: Jack Barr.

LY: ...oh Jack Barr was there, in the UN [United Nations]. And we also met his, a scientist he had met at a meeting in Iceland, you know, so the associations from the lab really even helped us in our trip to Europe, you know? Really, you know? So, the lab has been good.

EG: What was your favorite project at the lab, over, over the years?

HY: I think . . . the fish movements, the tracking of fish, we used the tags, the sonar, and things like that. It was, uh, yeah we had to get over certain blockings, and that, that was sort of why I was interested in the satellite, you know, it covered big areas. As it ended up when I was in the recreational fisheries part, we tried to track the movements of marlins, things like that, so we, we got gear that was portable. Some friendly captain in Kona said "oh, you want to use my boat? I'll take you out." You could just put your hydrophones down and tie it up so you didn't have to make us hold it. And, yeah, there were lots of nice people like that.

EG: Did you work with the aku fleet at all?

HY: Oh, I was involved with the aku from the standpoint of, well the big problem with the aku fishery was it's a live-bait fishery. You had to have bait that was alive and, and the bait

that was mostly used was the nehu, it's some herring-like fish. And, uh, so we were trying to make an artificial bait, maybe put the fish flavor with gelatin or whatever, whatever, we were trying to cook up something like that. So, we used to go aku fishing to catch aku to make bait. On the other hand, somebody was raising tilapia because tilapia are a hardy fish, you know, they survive anything. You can take them out to sea. Well, we weren't very successful with our artificial bait, never attracted fish. But the tilapia was like, we found out after going fishing that tilapia, and I was making observations and all that. Oh, the trouble is...well, the difference between nehu and tilapia when you throw it in the ocean, you see at one point, to find out how, how that they work, we'd find a school of aku out there. Two of us would jump overboard, the ship take off, we had a skiff with a hole with nehu flip, when the ship move we flip the nehu in the water, all the nehu, we see what happens. Well the nehu, first thing, they dive down and off they go. And then, ah, but they leave a trail, I don't know why, the aku follows the trail back to the ship. So, when you, so, so when we used tilapia we found out, well, the problem is that the tilapia doesn't dive, it goes straight, right back to the hull. So I proposed that maybe we should repaint the hull on the outside with mirrors, or shiny metal that reflect so the fish can see the bait but be right up against the ship. Because the way you catch, how they used to catch the aku was to throw the bait over and then keep the ship a little bit forward so the bait is still behind where, where you put your hooks, and then they catch up, and, you know, just jerking, like that. And tilapia make beautiful bait, otherwise they were strong.

EG: I thought tilapia were big, but you're talking juvenile, juvenile tilapia, yeah?

HY: Yeah, this size.

EG: Yeah.

HY: They, they, you know, you, you catch aku and you open it up, you see how much tilapia. Tilapia is still alive, you throw it back in.

LY: Yeah you have interesting background. Because you're working on this sociological project, but you know your, your, uh, marine biology, really, yes, you have a lot of experience.

EG: Just from listening.

LY: Oh, yeah? Really? No, no, no, I think you have personal experience.

HY: Yeah, nobody took me up on that hull, shiny hull.

EG: Ah, yeah.

HY: And, uh, the nehu was getting scarce too, because there were a lot of fishermen after... They were kind of delicate too. Oh – about the aku fishery in Hawaii, they just, I don't know how long you've been here, they used, at Kewalo Basin there was a tuna cannery there, and they canned a brand of tuna called Coral Tuna. And that was hands down the best tasting canned tuna you could get. And if you read the label carefully, you found out why. It's never been frozen. Fishermen come back with aku at sundown, by next day, they're chopping it up and putting it in cans already. And it shows; we were involved in taste tests, and that Coral brand actually stands out.

LY: Now it's the worst of the worst.

HY: And so... I don't know, a company called Bumblebee fisheries or whatever, bought up the--

LY: It's really bad.

HY: --Hawaiian cannery, and they used to, also bring in yellowfin they catch up, far away, and can it, but they kept it separate from the Coral, Coral brand tuna. Then Bumblebee decided well, if we had all our facilities in one place, it would cut down our expenses. They moved to the mainland somewhere. So, the Governor calls his business friends and says, "the cannery is closed. It used to hire 200 people, so maybe, why don't you try to restart that cannery?" And I don't know if they already got started, Bumblebee says, "oh no, that's our name, Coral brand is our name, you can't use it." So they closed it. And then, so Coral brand disappeared for awhile. And it's back now, it's the most awful canned tuna...

LY: It's so terrible.

HY: It says something about Pacific caught fish or something on the can, and I think it was canned in China.

EG: It's probably albacore?

HY: Huh?

EG: Albacore, do you think? Albacore?

LY: Well, you can buy albacore, good albacore, but Coral tuna, I don't know whether they...

HY: Albacore, well, see, albacore is a very white tuna. I mean, that species. And the albacore people tried to play a color, and that, you know, if it's dark it's not as good as if it's white. And so Chicken of the Sea is albacore. There's still Chicken of the Sea.

EG: Something else. Do you like aku?

LY: Oh, what?

EG: Do you like aku? Do you like skipjack?

LY: Not necessarily, no.

HY: I prefer aku sashimi to ahi sashimi.

EG: I like aku.

LY: You like, yeah?

EG: But lots of people don't.

HY: You fish eaters.

EG: Yeah, that's right. I like the way they...

HY: She always says, it's too fishy.

LY: Yeah, I don't like fishy fish. But it's so funny, yeah, I can't remember anymore, but I know where I grew up the people like a certain kind of fish but I never, yeah, I like non-fishy fish.

EG: Different people like different.

LY: Yeah, yeah.

HY: Well, speaking of, I just remembered something. When I left the lab, about the time I left the lab, I was the only guy that had a paper reported in *Science*.

EG: Big deal. I'll have to look that up.

HY: And that was, oh, I forgot the name, there was this argument between two guys, porpoises riding the bow wave, and this guy comes up with a whole bunch of mathematics, and this other guy comes up with another bunch of mathematics, look at that, look at that, I says, "oh, if this guy is right, the, the tail of the porpoise in front of the bow should look like this. If this guy is right, the tail should be like that." And luckily, we had this ship we, we can put a bow window, the *Townsend Cromwell*. So, I went, took pictures of it, and says, "oh that guy is right." That's science. And then later on, some students working with air tunnels or wind tunnels, they build models and they came out with the same conclusion. So, that guy that I said was right, he writes a letter thanking me, wanting to go out on a trip with us. Forgot their names already.

LY: Was it common in your lab to be associated with other labs? Because I know you were, but was it a common practice?

HY: Oh, I don't know, the, uh, others, we all get our information...

LY: Well, I was just thinking that you, you worked with--

HY: Oh, speaking of...

LY: I mean you worked with Jim Johnson in Seattle and you worked with, um, in, uh, San Diego, I forgot his name, and you, you know...

HY: A lot of the, there was some connection, we would.

LY: Yeah, so, was that common, was it, joint projects...

HY: Well, there was that oceanographer, oceanographer that worked with, uh, Cromwell--

LY: Oh, yeah.

HY: --the one we talked about earlier.

LY: Yeah--

HY: He was the one...

LY: --from England, yeah. I think that's good, that's a really, you know, good, not be so insular, you know?

EG: Was there, there was a guy, Tamio...

LY: Who?

EG: Tamio...

HY: Otsu.

LY: Otsu.

EG: Otsu.

LY: Yeah, he was his predecessor...

HY: He was one of the first local biologists hired.

LY: He was...

HY: A little bit older than us.

LY: Yeah, just, they started out as grad students picking plankton, but he was ahead of them, you know? Yeah, so, yeah, he's, he's, and also...

HY: I think he only got his bachelors anyway.

LY: He didn't get his masters.

HY: But, uh, his room was the news room, the gossip room. You want to find out anything that's going on, you go ask.

LY: He knew all the gossip. He still does. Yeah. No, he, he's kind of a character.

HY: He's quite a guy.

LY: He was the one, the story I said about the Japanese, Americans at that time needed to monitor the Japanese because it was so close to the end of the war? Well, he was the scientist, and then Van Kampen was the interpreter, and they got them all mixed up because here's Tamio Otsu, who looks Japanese, but he's American who can't speak Japanese at all, you know, and there's Van Kampen who looks so *haole*, Scandinavian *haole*, you know. Yeah. It was really, a good story.

HY: Yeah, Tamio came from the coffee fields of Kona. He used to say, you know, you're working in the coffee field and you're singing, the parents are listening, when they hear a peppy song, if you're good, when they hear a slow song, they're not working hard enough.

LY: So what do you think was a contribution of people like, um, whom I like a lot, Magnuson. What did he contribute?

HY: John Magnuson.

LY: He's a really good guy.

HY: He didn't work at the lab very long. He went back to education.

LY: He became a, he taught. He--

HY: That guy...

LY: Very good.

HY: ...he must have worked real hard, you know, when he retired he had lists and lists and lists of...

LY: Oh, right, oh yes, yeah. This is actually what, the advice that Heeny got but didn't follow, is write, you know, publish, and Magnuson did, wow, you know, tons. But yeah, very nice guy.

HY: Well, I wrote my share of papers. A lot of them are just within the, uh...

LY: Organization.[background noise]

EG: Federal system. Yeah, I've read [some of] them. Very good.

HY: I used to go out, the tagging was Jim Johnson was the--

LY: Oh Jim Johnson is a good friend--

HY: --he was--

LY: --Seattle.

HY: --salmon tagging, and we got to modify his tags.

LY: We miss all these people. They're gone.

EG: Tomorrow I meet with some of the people who were the editors.

LY: Oh.

EG: Yeah. Hazel, Betty Young...

LY: Yeah, they were secretaries.

HY: Oh, Hazel.

EG: Marion, yeah...

HY: She's the librarian.

EG: Yes.

LY: Yeah.

HY: When you go in that library, it was kind of, kind of sloppy library, you know, not so easy to find things. But, you know, you go to Hazel and say, "uh, Hazel, uh, a couple months ago I saw this article about sand fleas, or something, I wasn't interested in it then, but now I am." Ten minutes later, the paper's on my desk. She knew every piece of paper. I don't know if she read them all or what. She knows what she's reading. She's really smart.

LY: The other people who were at the lab who were not scientists, you know, were people like Nakata and, um, what is... They were the illustrators, and you know, they were wonderful. They were great at what they did, you know? Nakata was wonderful.

HY: Nakata was an illustrator.

LY: Who was the other guy who was really good too? He left before Nakata did.

HY: uh...

LY: Those two were so good. So they made them look good because their papers looked good, you know?

EG: Yeah.

LY: Yeah.

HY: He was the illustrator and he--

LY: So good.

HY: --publications he did great--

LY: Very good.

HY: --but where it counted was going to conferences. You know, everybody has slideshows, but nobody had better slides than we did because Nakata.

LY: Because of Nakata, you know, it's this auxiliary--

HY: What to emphasize, you know--

LY: --this was why I knew this lab was good.

HY: --he would make it big enough so you could see, the other guys just put, you look at the table and it's just a jumble of numbers. He knew which ones to make it big printed, you know, different color--

LY: Just really...

HY: --to bring out the meaning of it.

EG: So you'd take photographs of the...

LY: I don't know what he did.

EG: Yeah.

LY: Nakata. Nakata.

HY: He was the illustrator.

LY: Yeah, I know, what did he do, did he take?

EG: So you, he does a drawing and then takes a picture of it and then makes a slide for the slideshow?

HY: Yeah.

LY: Yeah. And the other person—

HY: He was, he was the guy--

LY: --there was another one--

HY: --that made the--

LY: --they both were so good. Excellent.

HY: --and his history was, before he got the job there, he used to make furniture. He and a couple other guys.

LY: And he was young, very young.

HY: So I'm interested in woodwork. So everything I make, I check, I checked out with him first.

LY: Yeah, he was a mentor, but... Excellent, excellent guy.

HY: He would say, "oh, you know, put a groove here, cut it this way or that way, and, and that'll improve it, make it stronger, whatever."

EG: A real hands-on guy.

LY: Yeah. But you can't...

HY: He used to...

LY: See these are people who are not, who are not recognized for their excellence. They were excellent, but not recognized, you know?

HY: Nakata used to have a vegetable garden, and he made Japanese pickles.

LY: That's in his later years after he retired, but he was a 4-H leader and so on, because...

HY: He used to make that earlier. And oh, he kept honeybees.

LY: Honeybees, yeah, well. We're straying, Heeny. We don't need to tell him. But he was a remarkable artist. A remarkable illustrator. He made them, their papers look good, you know.

HY: Yeah, we always had the best looking slides.

LY: So that's the kind of feeling we had about the lab.

EG: Did you, were there many Hawaiians?

LY: In the crew?

EG: In the crew.

LY: In the crew, very, and we'd go to, we'd go to Papakolea, you know, but not everybody did. They liked Heeny, you know. So, I'm thinking about, um, Kamau, he was a Chief Engineer, his, to live in Papakolea you have to have--

HY: He wasn't Chief Engineer

LY: --Hawaiian blood, you know, it's Hawaiian homes.

EG: Papakolea

LY: Papkolea, yeah, yeah. And so we'd go to his luaus, you know, they had luaus, and his wife was a hula teacher, you know, so when I was taking hula she gave the gift of, ipu, you know, so there was that connection. So not, not everybody, but Heeny was, you know, and me through Heeny, you know?

HY: Walter Paulo.

EG: Oh, I met Walter.

HY: He, he worked his way from fisherman up to skipper.

LY: Now he's teaching Hawaiiana to--

HY: And he...

LY: --young people.

HY: ...he was...

EG: I think he's make [mah-kay]?

LY: Well, the last time we saw him was in Miloli'i, that was a number of years ago. But at that time he was teaching, he was being a mentor to younger Hawaiians, you know?

HY: Yeah he was a...

LY: That's how many years ago.

HY: He was a Miloli'i grad.

EG: I met him in Miloli'i.

LY: Oh, you did? Oh you did, you went to Miloli'i?

EG: Yeah.

LY: Oh was, was there, you know, when you went to Miloli'i, here's Miloli'i, you know the, the hill around the, was it already, see the last time we went we were so disgusted, there were streets being made and--

HY: Houses being built--

LY: --it was still, it was a, oh, good, good good. Really nice, really. I just love that place, yeah. But now, you know, the last time we went, they have, it was, like, what do you call those places, um...

EG: Subdivisions.

LY: Yeah, subdivisions coming in, and...

HY: Yeah, Miloli'i, they had the old story about opelu...

LY: So when did you go there? When did you go there?

EG: '95.

LY: Oh yeah? Oh. You, you traveled a lot, wow.

HY: Did they feed the *opelu* fish?

EG: Yeah, with, uh, *palu*, um vegetable mash.

HY: Whatever, whatever, the fish gets used to the canoe, or whatever, and then one day they put a net underneath and they feed the fish and--

EG: Like one big fishpond.

HY: --those nets were, the ring was reinforcement bars, you know, when you build concrete, and they bend it, like this, and then they come, and tie it like, so the mouth is open--

EG: For the net?

HY: --and then when, when they, uh, feed the fish, the fish come over the net, they, they have a certain knot, they pull this one, and it locks, and then the, the, so the rods get straight so that closes the. It's sort of like a purse seine, in effect.

EG: Yeah.

LY: But you know, your question about whether there were Hawaiians, I don't think there were any Hawaiian scientists or technicians. They were all in the ship's crew, right? Fishermen or crew members?

HY: What?

LY: Hawaiian, Hawaiian people in, do you know of any scientists...

HY: Oh, they were hired because...

LY: No, do you, did you know of any, in those days, were there any Hawaiian, um, scientists?

HY: Oh.

LY: I don't think so, I can't think of any. I think now there are, but not then. But that's the thrill, you know, the resurgence [of the Hawaiian people following years of oppression], because the, you know--

HY: All these groups [Heeny goes back to the topic of *opelu* and how local residents would tend to the schools of fish, feeding them, and eventually harvesting them for food] --

LY: --what's happening in the Hawaiian community.

HY: -- and all of these *opelu* schools, each will have a leader, not necessarily an *opelu*, but *opelu* schools will follow. And each fisherman there had his own...

LY: *Opelumama*?

HY: You know, school [of *opelu*] going, and sometimes after fishing, someone [someone's *opelu*] would get lost, and they'll say, oh, they're so-and-so's, take it back.

LY: What's that? [the horn of a large ship entering Honolulu Harbor sounds in the background]

HY: That's the kind of story about that...

LY: So what took you to Miloli'i?

EG: I was working with various small-scale fishermen around the islands, so.

LY: Oh, oh.

EG: Oh, I cannot remember why I went to uh, I went to Ho'okena, and Miloli'i. And, um, worked with [fishermen] on Kauai [and elsewhere].

LY: With Hawaiian fishermen?

EG: Yes, yeah. So.

LY: You must have found them really nice people.

EG: Oh, just wonderful.

LY: Yeah, really.

HY: Working in the southeast, our ship never had too much storage room. If we went out to catch *aku*, we'd come back with, we'd give it, we'd stop at the nearest village and hand it out. Or if we were longlining, this, before we get there, we'd raid the freezer, that would be interesting.

EG: Yeah.

HY: Take them off and, in the Tuamotu Islands, the, they would put a stone to every family on their wall. And then when the fish came over they would cut it up, divide it up. And I remember the chief made a story, made a speech, that we see this strange ship coming in, flying an American flag, and they come in and they give us this huge fish, and they ask where they can look, they're looking for small fish. We're looking for *aku* bait, you know, the small fish. He says, I, I don't think they're American, because Americans like things big. [laughs] Oh, and then, how we, how we communicated, is he spoke in his language, and there was a guy from Tahiti, uh, that's, that knew that language and French, and, I, I think he also knew English, a least a word. So.

EG: Well, those are all very good stories, I really got a lot out of it.

LY: Well, sorry, I...

EG: No, no, no it's wonderful.

LY: They seem to be away from your focus, which is...

EG: No, no, no, it's all relevant.

HY: One time we were looking, we had Lucien Sprague, a geneticist type, I forgot what his rating was, but ah, in the Atlantic Ocean, the eels have this route that goes around and they spawn in a certain area, and the techniques were not really developed, so Sprague wanted to get some eels and eel blood and, you know, do his chemistry thing. And, uh, so we, when we stop at this island we would see whether they had eels or not, and so we stopped at this island, in the Marquesas, went ashore, went to the, ah, the medical clinic, figured the doctor there would be the most scientific guy around. But he was not a full-fledged doctor yet, more like first aid things. And he says, "well, the eels come out at night, so why not go look for them at night." And in the meantime, there's some nice tikis on the hillside, on the mountainside, so let's go up there, look at the tikis. But first I have to see my patients. I have some patients in the other room, turns out the patient had elephantiasis, you know. Was spread by mosquitoes. So anyway, so when I got back we went to catch eels, oh man, we were slapping mosquitoes like mad. [laughter]. You could see those legs. Anyway, we caught one eel and we came back to the ship, caught a scruffy looking eel. Meantime, the natives come on the ship to watch what movies or, we had some good musicians that would start playing music, and they would come and they played their music, and the guitars and all that stuff. And this guy says, "oh, how come, where were you?" We said, "we were trying to catch eels." And he says, "oh, you want eels, are you coming back here?" And I look at the calendar, and I gave him a date we would be back. He says, "okay, you come back here, I'll have some eels for you." So, we went on, did some more work, and landed back on the same island, and in the early afternoon and the man came aboard, says "I have these eels." And they were all dead. We needed them alive to get the, so I tell him oh, we have, he says, well, "okay, I will catch them tonight. So why don't you come over for dinner?" The Chief Scientist and some of the fishermen, to catch eels, come over for dinner. And so the rest of the afternoon, he's talking about how the Marquesas Islanders were cannibals up until 1930, so on. And his father used to say where the best place to eat is the palm of the hand, and he said that...and then, you know, he invites us to dinner. He had a sense of humor. [laughs]

EG: To dinner, or for dinner? [laughs]

HY: And so at sundown, we jumped into the skiff, he jumped into the skiff and directed us how to get to his village which was around the point. And, man, you get there, it's like Hollywood. There's these coconut palms and the moon coming over and a deserted beach, and, and so we had dinner. He had a bottle of scotch that he was saving. He cooked goat meat, and these are domestic goats, and they don't have that gamey taste. Anyway, we had a nice dinner and he, he says, "oh, I noticed you're getting anxious, talking about, but we'll catch those eels for you." So he calls a couple of guys, the villagers, and they go down to the beach, pick up bird eggs, tern eggs, put them in this can, they go in middle of stream, beat it up, flip the can over, eels coming all over the place, you know, in about twenty minutes we had all the eels we needed.

LY: How did you catch them?

HY: Scoop 'em.

EG: Scoop them?

LY: With a net?

HY: Yeah. Because they're not trying to avoid you.

EG: Smart, eh? [the Tuamotuans]

HY: And we go back to the ship, boy, I found out what they meant by slippery eels - that got really slippery when you poured 'em out! And we had to take the blood samples right there --

LY: Those were good years.

HY: --but we didn't know how to do it [catch the eels].

EG: What did you do with the eels after? What did you do with the eels after you got your samples? Did you, did you eat them?

HY: Uh, [carries on with previous thought] you know, you mix it with some chemicals and you look at the bands, how dark or different color or whatever. I forgot what the technique is called. It was, see, when I got, ah . . . the double helix came out after I left school. And this is the, you didn't know about the double helix then, but this is a precursor...

EG: Plasma?

HY: Yeah, yeah.

LY: So what did you do with the eels?

HY: I don't remember.

EG: That was it.

LY: Yeah, I know. I just wondered too.

HY: Maybe, maybe the cook took over, I don't know.

EG: Fry them up.

LY: Do you eat eel?

HY: I don't remember...

EG: Sushi.

HY: But uh...

LY: But when they... In the early years, raw fish, poi, oh, there was so, you know, we loved it, but people sometimes turned their nose up on it, you know, horrible, you know. And then they grew to love it. And then the next generation of people that came, they all loved it before they came, you know?

EG: Yeah, it's different now.

LY: Yeah very different. The world had changed.

HY: I remember Eugene...

LY: Oh yeah, he's a mainland . . .

HY: His, his father grew up in Kohala, but moved to the mainland, you know, he, he grew up on the mainland and his father always used to talk about Hawaii, so he came to Hawaii to do his graduate work. He was a herpetologist. Well, we have one live snake, about this big, that looked like an earthworm as well. So he switched to fish.

LY: And they met, they met at the University of Michigan bug camp, you know.

HY: Summer school.

LY: Yeah, summer school. Bug camp.

HY: Anyway, he was determined to like poi.

LY: He hated it.

HY: So I did, he got poi and threw it in the freezer, got it frozen, then he sliced it and ate it with peanut butter [laughter].

LY: He did everything to try to like it, you know. He's a good friend of ours, really good friend.

HY: He was, the guy that, maybe I told you this already, got to keep tuna in captivity alive.

EG: Yeah, yeah, at Kewalo.

HY: Yeah, at Kewelo.

EG: That was, I think the only place in the world that did that.

HY: So, he, he was interested in their visual acuity, so he would, the window of the pool, show a picture with bars alternating dark and white bars, and when the bars are vertical the fish would get fed. When they're horizontal, the fish would get shocked. And so while he was waiting to get his live tuna, he caught some *ulua*, and he read that's *ulua* that *ulua* would learn it today, tomorrow they would forget it. So, but when he, he when he got his tuna going, he wrote a nice paper, very...

LY: Did they remember?

HY: Uh, you know, the details on how well they could see because...

LY: Did the, did the tuna remember?

HY: Yeah, he did, that, that...

LY: They did?

HY: ...they did, the *ahi* remembered.

LY: They did. Oh. Kind of fascinating.

HY: The *aku* remembered. And he got it down to when they started making mistakes, they can't see anymore.

LY: Who was that, who was that guy that wrote, the behaviorist, there was a book, a popular book on behavior, animal behavior. King something...

HY: Oh, oh, oh...

LY: Wonderful book.

HY: Oh, that, the well-known European.

LY: Yeah, European author, on studies of behavior, animal behavior.

HY: He talked about dogs and--

LY: And--

HY: --birds and...

LY: --ducks and or swans, and. I forgot his name.

HY: You probably know his name.

LY: Yeah. So where did, did you go to school in North Carolina?

EG: Yes.

LY: You did? I see.

EG: And I finished here.

LY: Somebody, somebody I know went to North Carolina. Oh, I think, Lala's boyfriend is now there, oh ex-boyfriend, is there.

HY: Ah, you know, I do volunteer work at Hanauma Bay.

EG: Oh, okay.

HY: And one person that worked with me, uh, she's, she was a military nurse, she's from North Carolina.

EG: Well, I should probably let you folks get on with your day, um.

LY: I don't know if...

EG: We did, no, we got a--

LY: Is it?

EG: --all kinds of good stuff.

LY: Oh yeah? Oh yeah. We didn't get to know you, we didn't give you a chance to talk.

EG: Oh that's all right, it's my job to listen.

LY: Yeah, really. So what are you going to do with this--

EG: Hang on...

LY: --interviews?

EG: We'll wrap it up and then chat some. So thank you very much, it's so nice to meet you and listen to the history of--

HY: You know,--

EG: --the lab.

HY: --I always admired people who wrote books. Any kind of book, I said, that's, no matter whether I think the book is good or bad, that guy really, he accomplished something. Because, you know, in my freshman rhetoric class we had to write compositions all the time and I end up thinking, boy, people write books are pretty strong.

LY: Okay, let him finish. Sorry, we don't give you a chance.

EG: No, no, don't worry. All right then, aloha. Thank you very much.