Maritime Studies Capstone Seminar Oral History Project
Hans Laufer Oral History
Date of Interview: April 21, 2020
Location: Essex, Connecticut
Length of Interview: 00:26:24
Interviewer: TK – Tanner Kern
Transcriber: NCC

Tanner Kern: Can you please give me your full name and what town you currently live in?

Hans Laufer: Full name and what?

TK: What town you currently live in.

HL: The town I currently live in? Oh, okay. My full name is Hans Laufer, and I live in Storrs, Mansfield, Connecticut, near the main campus.

TK: What year were you born?

HL: 1929.

TK: Where did you grow up?

HL: Well, my first nine years were spent in Germany. I was born in Germany, which is now – the town is now in Poland.

TK: What was growing up in Germany like?

HL: Well, it was good, until the very end. But the Nazis took over, kicked us all out, kicked me out of school.

TK: Was that your reasoning for coming to America?

HL: Well, we were lucky enough to get out. This happened – we went through Kristallnacht, which was in the fall of 1938. We left in the spring of [19]39.

TK: What was the transition like coming to America?

HL: It was traumatic. My last day in school was November 9th, I believe.

TK: Can you describe what it was like in Germany at that time, with the Nazis coming in?

HL: No, no. They took [inaudible] in 1933. They took – locked up the Jews, that was November 9th. It was Kristallnacht. They broke all the Jewish stores and burned the synagogues and prevented Jews from going to school. They prevented Jews from having jobs, which meant that my uncle left in 1938 and came to the United States, which helped us to immigrate in 1939.

TK: So, can you talk to me about your family, your parents, if you had any brothers or sisters, or any relatives?

HL: I had a brother. He was a little older than I was. My father and mother were nice people, and we were very comfortable. My father owned the first car in the town we lived in. He never drove any. He had chauffeur. We had a lot of help. We had people taking care of us,

housekeepers, and a cook. As I said, we had a driver , a car, and we had a lot of property.

TK: What did your parents do for a living when you were in Germany?

HL: My father owned a recycling business.

TK: Did you work in that business at all when you were younger?

HL: I was 9 years old when we left. So, I didn't work [laughter].

TK: Yes. So, when you came to America, what was that like, transitioning into a different school district and all that.

HL: We moved to the Bronx in New York. I went to very good schools. In fact, I went to elementary school, learned English in about six months, and got into very good classes. Went to probably the best high school in the country. I went to Stuyvesant High School in New York. I had very good biology. I took an advanced biology course, and I became the teacher's assistant. He taught me a lot.

TK: Is that what sparked your interest in science?

HL: No. Actually, what sparked my interest in science was when we lived in Germany, we had a lot of animals. We had horses. We had goats. We had pigs – we had a pig. We had rabbits. My father, I think, was interested in biology. So, when we came to New York, I asked my mother if we could have a cat or a dog. She said, "No. We're living in an apartment. We can't have big pets." I said, "What can we have?" She said, "You can have fish." So, I got a fish when I was about 12 years old. I've been raising fish ever since. I raised guppies, and then I raised egg layers, [inaudible] fish. I raised fighting fish and Libra fish.

TK: So, that is when you sparked your interest in maritime studies.

HL: No. That sparked my interest in biology and aquaculture.

TK: What did you do after high school? Where did you move on to get your next degree?

HL: I got a master's degree from Brooklyn College. I got a bachelor's degree from CCNY, major in biology. Then I got a PhD at Cornell University. I had some very exceptional instructors in my PhD program, including – my graduate committee was a Nobel Prize winner in biochemistry. His name was J.B. Sumner. There was a young assistant professor, [inaudible] assistant professor. He became an assistant professor at Cornell the same week that I was a graduate student. His name was Howard Schneiderman. He was interested in insect development. He was interested in insect hormones, which attracted me a great deal. My major professor was Marcus Singer. During my career as a graduate student, he said I had to go to take the embryology course in the Marine Biological Laboratory in Woods Hole, Mass. That was in 1960, about [19]67, [19]66, I think it was – no, [19]56, sorry – 1956. I took the embryology course at Woods Hole, and that certainly affected my life. I've been going to Woods Hole just

throughout every year ever since. I became very interested in invertebrates and particularly, endocrinology of invertebrates. So, I made that into my career.

TK: After you got your PhD, what was next in your professional career?

HL: Well, I became a post-doc. I was a National Research Council fellow in developmental biology at the – in Baltimore, Maryland. It was the Carnegie Institute. I was a National Research Council fellow with a person I worked with. His name was James D. Ebert, and he was the director of the laboratory. I did research. Actually, he became director at the laboratory in Woods Hole.

TK: So, when did you get to UConn?

HL: That was in 1965.

TK: What was your role there initially?

HL: I was an assistant professor.

TK: What classes did you teach?

HL: I taught developmental biology, embryology.

TK: When did you really get into studying crustaceans and annelids in maritime research?

HL: In Woods Hole, I went every summer. I went to Woods Hole to study the development of invertebrates.

TK: Did you ever do that at UConn?

HL: Yes. That's how I spent my career.

TK: So, what did you like most about studying that over the course of your career?

HL: Well, what happened is, the guy I was working with – one of the people I was working with at Cornell – his name was Howard Schneiderman – he was interested in insect development. Okay? Hormones that control insect development were quite well known. For example, the molting hormone was called ecdysone. But it turned out that the crustacea had the same hormone. It was originally called crustecdysone because it was found in crustacea. So, insects and crustacea have the same molting hormone. But there was a juvenile hormone in insects, which was clearly – crustacea have juvenile hormone, but it wasn't known. So, one of my major projects that I took on is the study of the juvenile hormone of crustacea. I actually, in collaboration with some chemists, determined what that hormone is. It turns out, not only is it the juvenile hormone of crustacea, but it's also the reproductive hormone. We took that – got the first patent, in biology at the University of Connecticut for the control and reproduction of crustacea, which includes shrimp. Shrimp were being cultivated in aquaculture, but they didn't

know how they reproduced. But now we patented the hormone. That discovery was evaluated by Pfizer at $10 million a year.

TK: So, can you talk a little more about the continuation of that research in aquaculture with crustaceans?

HL: Well, I did some collaboration with some people who grew shrimp in aquaculture, and it works.

TK: How does that process work?

HL: Well, you put the hormone into the food, and they reproduce. They grow, and they produce eggs.

TK: Now, what did you like least about your research over the years?

HL: Well, it's useful. You know how animals grow and control their growth.

TK: Was there anything about the research that you didn't like or any topics that you looked into that you were never really that interested in?

HL: No. I found it very interesting.

TK: Now, looking back on your career, would you pursue the same path if you had to do it all over again?

HL: Well, you can't do it over again because it's already done.

TK: Yes. But are you happy with the career path you chose?

HL: My accomplishments? Yes. It led to a lot of grant funds. We looked at how lobsters grow, how lobsters reproduce, how shrimp reproduce. Then we got into pollutants in crustacea and how the environment is affecting the growth and reproduction of crustacea. We've been doing that ever since.

TK: Now, with all the environmental issues we have going on in today's world, how is that affecting the crustacea and lobsters and all the marine species?

HL: Well, you know, the lobster population in Long Island Sound is down to 3 percent of what it was in the 1990s and 1980s. Three percent had been killed off by the people who were talking about the environment saying it's temperature. It isn't temperature. It's a combination of temperature and pollutants. The pollutants should come from plastic breakdown. The plastic breakdown compounds have hormone effects on crustacea. We found that there's enough pollutants in there that keeps the animals from developing into lobsters. They don't undergo metamorphosis. There is a hormone in annelids that is analogous to our hormones – the hormones we discovered.

TK: Did you look into any research about how we could save the lobster population and propose that?

HL: Yes. Stop using and discarding plastics and plastic breakdowns and detergents.

TK: Did any government ever listen to your research team about this?

HL: No. The people who manufacture this stuff are making billions, and they say that it's safe. The EPA says that these compounds are safe. But they're not. They're talking about money, not about science.

TK: What would you say the biggest changes in your field has been since you began your career?

HL: Well, the biggest change is there isn't enough money around to research.

TK: You guys have more money now?

HL: No, I don't. It's very difficult to get grants. I used to be one of the people that they talk about at the Sea Grant program – that I was getting too many grants. Now, I don't get any. I don't even feel like making applications because they don't even read my applications. They don't have enough money, or they know other people they want to give money to.

TK: Are you able to get any research done without funding? Is there any way for you to overcome that?

HL: I have some contributors.

TK: What's a typical day for you in your research?

HL: Right now, I'm not going in because I'm not supposed to go in. I'm taking care of a shrimp colony. Shrimp have never been reproduced in captivity, but I've gotten to reproduce them.

TK: Can you talk a little bit more about that, how it started?

HL: Somebody contacted me and asked me. He sells shrimp in globes, in EcoSpheres, they're called. Have you ever heard of that? EcoSpheres? They're globes, shield globes. The globes are shielded. That's why shrimp, you put in the bowl – really on the inside of the bowl, and you put in algae and other food. They instruct whoever keeps the bowl to put light on it. The light makes the algae grow, and the shrimp have stuff to eat. But these shrimps are growing wild in Hawaii, and they're imported. The guy who sells the globes has been concerned that Hawaii would stop the exporting of these shrimp, making these globes. So, he's been supporting my research to some extent, and we've been able to grow these shrimps in captivity.

TK: Now, in the future, without the grant money, what do you think the marine ecosystem is

going to look like?

HL: Unless we took the plastics out, it's going to look terrible. There are more plastics in the environment than there's going to be fish or mollusks.

TK: Now, are there any advocates that you know that are really pushing to make a change?

HL: There are some organizations that are talking about cleaning up. Nobody has been very successful.

TK: Do you have any favorite stories from your professional experience? This can be anything you'd like to discuss.

HL: Well, like I said, we got the hormone to reproduce shrimp, and shrimp are grown all over the world now.

TK: Do you have any stories about just like a day on the job that you remember, you can recall, that were noteworthy?

HL: Nothing special.

TK: Okay. Now, before we wrap up, I just want to ask you a couple more questions. So, consider someone who might listen to this interview in twenty years. What would you want them to remember about crustacean annelid research and all your studies in the maritime field during your research career?

HL: Well, I think it's important to do research. Ask questions. What's going on? How can we alleviate the problems? There are a lot of problems. Like I said, the lobster is down to 3 percent in Long Island Sound. We're going to probably wipe out all the living organisms in Long Island Sound, unless we clean it up and control the temperature. Climate change is a big problem, as well as every [inaudible], as well as the pollution.

TK: Do those two provide like a perfect storm of destruction?

HL: Yes, sure do.

TK: Is there anything else you would like to talk about?

HL: Well, it would be nice if we get the government to back up some science, number one. Number two is they provide some financial support like they used to. I think there are a lot more scientists nowadays than there used to be when I started out. When I started out, you got your grant, you got your money. Nowadays, if you get your money, you'd be one of 10 percent to get their money.

TK: The government isn't supplying UConn researchers with much?

HL: They do supply some money, but it's got to be very spectacular research. It's got to be a big group. Or it's got to be a health group.

TK: So, they don't take maritime research as serious as they should?

HL: That's correct.

TK: Anything else you'd like to touch on today that we didn't get to?

HL: No. Did I leave anything out?

TK: No.

HL: Well, I should say that the people I worked with were really outstanding. I mentioned this fellow, JD, James D. Ebert, who became the director of the Marine Biological Laboratory for a few years. He also became vice president of the National Academy. I mentioned Howard Schneiderman, the assistant professor who started out about the same time I started out as a graduate student at Cornell. He ended up as vice president of Monsanto Chemical Company. He headed up a lab that employed more molecular biologists than any other lab in the whole world. They did their first molecular biology research modifying seeds, plants. This was a time of great interest and advancement of science.

TK: Okay. Well, thank you for taking your time out to speak with me today. I really enjoyed talking to you.

HL: Okay. Thank you.

[end of transcript]