Waikalua Fishpond Oral History Project, 8. Audio Recording of Interview of

Hiroshi Kato

Interviewer: Kellen Tanaka, Cultural Researcher, Cultural Surveys Hawai‘i
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[Editors’ Notes: Brackets indicate the insertion of caption headings and recording times to summarize topic sections and provide keywords for searchability.]

Part One

[***Hiroshi Kato’s Introduction and the Windward Community College Connection to the Fishpond]***
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KELLEN: My name is Kellen Tanaka. I was born and raised in Aiea. I am a Cultural researcher with Cultural Surveys... we'd like to thank you, first, for participating...: So, what is your relationship to Waikalua Loko I‘a and the ahupua‘a of Kāne‘ohe?

HIROSHI: I worked for many years at that Windward Community College...I started when the college started in 1971, or '72. And I was...teaching Biological Sciences until a few years later, then I became the Dean of Instruction and I was in a dean's position until I retired in 1996...Okay, yeah...
KELLEN: 1996, okay...
HIROSHI: Yeah. I retired then. But, in 19...think it was 1970- '76? Yeah. I think in 1976 or so, for a brief time, before I went into administration, I was teaching Biological Sciences. And at that time, here at this fishpond Waikalua Loko Fishpond, it was owned by Castle, and a subsidiary of Castle was Kāne‘ohe Ranch, and Kāne‘ohe Ranch owned it. And...one of the old-timers that worked for Kāne‘ohe Ranch for a long time was Henry Wong. And Henry Wong, I believe he was from this- from this area, purchased the fishpond and everything that went with the fishpond. And on the fishpond there was a little house, like a ramp and a little house that was on the end. It was like, you know, like a.I don't know, a Summer place or getaway place for the Wong family. And anyway, when- when Henry Wong took over the pond, he looked at, you know, everything in the pond, and at that time, the pond was just not like this at all. It was completely overgrown with mangroves. This portion down here was full of mangroves, but there were fish in there. And the good news is there are a lot of big fish like the olua, barracuda, and fish like that. But usually for fishpond, you wanna raise mullet, and those big fishes were eating all of the mullet, so, you know, he couldn't raise mullet.

So he approached the college to see if we could assist in doing something about taking care of the - the predators, the- the big fish. So we had a project at that time, we had an independent study program of

 

whatever they- the-the students wanted to do. And one group, about eight students or so, wanted to work on a fishpond. So they got together... And everything was student-done, I gave them lot of credit, okay? And at the end, they came up with a real nice report. But going back to the students, they talked to the fishpond owner. And they said, they find a problem, "Too many predators, and the predators are eating the mullet. So, how can we solve this problem?" And jointly, they came up with a solution, saying that "Well, if we fenced-off an area to keep the predators out, then maybe we'll be successful in raising the mullet." Yeah, so they looked at different alternatives, and first one was just along that wall there, put a fence going straight across, okay? And the pond wasn't all that clear, all [the way] to the end, they had a lot of mangroves and stuff, but if you put a fence in there, and you can just make one string of fence to land here, and maybe cross a little bit. And that'd be the easiest way to do 'em. But after thinking about it and looking at what's happening around this area, they decided that "No, if you do it like that you'd have a poaching problem. You know, people would come over from the ocean side, but they'd throw nets and throw net, catch them all at the take-off. So after different ideas, they came up with one where they have- The house was here, just on the other side of the house, put a fenced area from the land here. Went straight up, 300 feet, a hundred feet this way, and 300 feet back. Okay? So, they said "Okay, good idea, and then we'll put the mullet in here and the predators can't get in."

Good idea, but the implementation, that's a different story...Okay, so how do you do it? So they got some fencing from the mainland, which I had ordered, and it was real good fencing, it was a plastic-coated wire, plastic-coated screen. And, uh...like I said, they had a lot of mangroves in the back. So mangroves are very tough and very water-resistant, so they cut a whole bunch of mangroves and brought 'em over. They made posts about 10 ft tall. Created a device, like a- like a big pipe with a cap, two handles, and they would go on a boat, a little skiff. One person would hold the mangrove, another would hold a [boat?], and the third one would just ram that thing down, okay? And before they did it, they had to take a survey of what the bathymetry looked like, you know? And so, they found out "Yeah, okay. It's pretty level in this area." And plus that, about a foot of silt, maybe another five feet of coral rubble. So they had that. All of this was part of the...the problem-solving.

And so, they- they did that and it had a way to figure out "How can you make a straight line just by eyeballing it?" And they got the poles in. Got the fencing, put the fencing in. And when they put the fencing in, they decided that, yeah, with- just with the weight of the fencing, it would go down through-through the mud. So everybody was happy and they tried different kinds of tie wire and they came up with the right one. They had the area all fenced up. Which was terrific, okay, but then they looked and they saw a lot of limu in them and the [?], which is an introduced species, came in by accident, I think a little after the war. And so they had to get rid of that. They got rid of that.

A week, two weeks later they're right back again. So they had this kind of problem they had to solve, you know, "What's the best way to clear it?" They had to clean off the limu from the side of the fencing because as long as it's got growth on it, you don't have the [circulation?] of the water going through for the mullet. So they had those problems to deal with. They figured out the problems. Then, next thing they did was to- They had to look for a place to catch the mullet, the pua ‘ama, the baby mullets. And they [went out on the bay?] and they found out that they have to figure out what tide was the best.

 

You know, high tide, low tide, wherever, moving tides. And they found out the best place was right out here. Just straight out here, in the shallows out here. And so they got a boat from Coconut Island, and I think I had my skiff, too. Coconut Island is right out there. And so, that boat had a live well, so it was good, so using a- a- You know what a nehu net is?
KELLEN: Uh...No. I- I mean, I've heard of it...

HIROSHI: Oh, okay. A nehu net- Nehu is an anchovy, small anchovy that they used to use for the aqua-boat fishing, you know, the fishing boat. And so the nehu net is a long net that's small- small eye, and a back pocket, and a back. So we- we gotta ahold of a big nehu net and caught some mullets. Brought the mullets from there, the skiff, all the way here. And they had figured out that in one bucket, they have so many mullets, so by carrying the mullets from here running straight across, and putting in there and they could figure out how many mullets they had and they did a pretty good job on that. And after the mullets were in there then the problem wasn't all solved yet because what they found out was that although the idea of getting the meshing straight down here, through the mud, was okay- It wasn't completely flat, yeah. So they had to get sandbags and fill up different places. And everything was fine. The good news was that, you know, you got some big Samoan crabs in there. The bad news was that the Samoan crabs would dig underneath *chuckles*
KELLEN: Oh, yeah...

HIROSHI: So when they dug underneath, then they had the a little space for- the predators could go in, and the mullets wen go out. But, you know, these are just some of the things they came up with. The reason I mention this is- this was an on-hands learning experience. You know, they- they had problems that came up and they...
KELLEN: ...figured out...
HIROSHI: Figured out, yeah. Right. Exactly. And so it was unique in the sense that...they- they had to see what the problem was and then they had to solve the problem...
KELLEN: And this is, like, in the 70s?
HIROSHI: '76, I think it was. 1976, yeah...
KELLEN: This is like, yeah, 20 years before the Fishpond Preservation Society...
HIROSHI: Yeah, before even that Fishpond Preservation Society took place. This was even before that. At twenty years...
KELLEN: That was Windward Community College students?
HIROSHI: Yeah, Windward Community College, yeah. They were all Windward Community College students. Yeah...
KELLEN: And they were part of, like, the Hawaiian clubs? Or the Hawaiian program? Or any particular science?
HIROSHI: No, no. No, at that time, it was strictly science. But as they were learning about the Fishpond, then they learn about the ahupua‘a and what makes a fishpond, you know? And they could really appreciate it, because you can't put a fishpond anyplace. Okay? A fishpond has to be where there's a flow of fresh water coming in. And, you know, there's constant circulation. And also, it can't be too shallow, because it'd be too hard. It can't be too big, too deep, because then it'd be difficult to catch the fish in there, you know? And so, all of these conditions have to be just right. And like the- with the fresh

 

water coming in, the salinity had to be just perfect and everything, you know. And so this was a real hands-on learning experience, yeah.
KELLEN: And yeah. So they were learning all about all of that, the salinity, and-
HIROSHI: Oh, yeah, yeah...
KELLEN: You know, the environmental...
HIROSHI: Right. Exactly. And also, you know, the concept of the Ahupua‘a. You know, from the- from the land to the sea, what happens up there affects what's down here. And a good example here is that, like right now, the streams that used to feed in the pond are- no longer do.
You know, there all blocked off. And- And so, that was somewhat like the- the kind of start of it. And then, we had some programs at Windward, like the Voyaging programs and, you know, that we had. Yeah, students learning about navigation, but not only navigation, but you know, the Hawaiian history behind navigation. And also, as part of navigation, they go to different wahi pana, or well-known places. Historically well-known places, and stop, and either do ceremonies of the ancient times or at least learn about, you know, learn about that. And learn about fishponds in general. How...How many we got here, you know, in- all along the coast. Most of them are all covered over or not in existence anymore. In Moloka‘i, everything along the shoreline is just loaded with fishponds.

And, uh, are you a student in Archeology, or are you an archeologist? Or...
KELLEN: Well, I actually studied Anthropology. So yeah...
HIROSHI: Oh, Anthropology? Yeah, yeah, yeah, it's connected. Yeah, yeah, yeah
KELLEN: But I didn't really to get to-
HIROSHI: Yeah...
KELLEN: -get out and get my hands dirty and stuff...
HIROSHI: Yeah, yeah...
KELLEN: It's a lot of book stuff.
HIROSHI: Yeah, yeah. But- But, so like, a good example is, um, you know, talking about the ancient side of the fishponds, and the importance of the fishponds. In Moloka‘i, you know, if you get an aerial view of Moloka‘i, especially on the East side, you can just see fishpond after fishpond and fishpond. And so, it's no wonder that, to this day, Hawaiians refer to Moloka‘i as [Moloka‘i] ‘Āina Momona, you know, the Fat Island or the Island That Has Plenty. More than what, you know, what they absolutely need. And the fishpond is but one reason. And so, all of this, we try to bring it all up. And so, it‘s learning not only biology, but, you know, beyond that. Yeah... So, that's the start of it and- and later on, right after that, I think, I went up in Administration, so I wasn‘t really on the hands-on things.

But- But then I started a you know, Navigation class, with Nainoa Thompson. And then, at that point, I was like, Administration, so I wasn't teaching. So...So I got the...You know, Floyd, to teach Zoology...Not Zoology, but Geology. And Joe Ciotti to teach, you know...Astronomy. And a couple others, in the fields, put together this Navigation class with Nainoa Thompson. And they would go around, actually sailing different places, and also learning about the environment. And as- This was just- I'm mentioning this just from the connection, you know. How we got together with people like Floyd, and Dave Krupp was...was teaching Zoology. I guess he still is now. But we- So we got those group of students, the people together. And in 19...When did we first start on this Fishpond Society? 1990-something...

 

KELLEN: I believe it was about 1995. 1996 or so...
HIROSHI: Yeah, yeah, yeah...Anyway, I knew Herb Lee from the Rotary Club. Kāne‘ohe Rotary Club, many years ago. And so, he asked me to be a part of, or at least to start, this association of Fishpond Preservation Society. And so there, I met Hal [Hammatt]. And I think Floyd, Floyd, [McCoy], and some other people, and that's how it started. And so it was very coincidental, if you could call it that. All these different people from different places getting together, you know, just figuring what you could do. These guys, like...with Hal. I knew him from way back, through aikido.
KELLEN: Oh, yeah?
HIROSHI: *chuckling* Yeah!
KELLEN: You do? Wow! Yeah...
HIROSHI: And, uh...Like...And Herb was through Rotary. And I forgot who else from some...you know, some-some different places...Oh! And Dave Krupp. When I was on sabbatical leave, I think, and I was doing some stuff at the Samoan Department. And he was- I think he was graduate student then, and Clyde Tamaru was also graduate student.

***[Start of Waikalua Loko Fishpond Preservation Society, Changes in the Pond, and Learning from Tradition as Well as Modern Science]***
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And so it's just these...different places. And to meet like that, you know, it's just so coincidental, if you will. Or maybe it wasn't coincidence, you know? And so, that's how the Fishpond Society started. And so, when Herb said what we were trying to do, I thought that was really great. You know, really terrific. And, of course, part of it was that the fishpond was a part of this golf course- I don't know what-
KELLEN: [indiscernible]
HIROSHI: Yeah. Bay View, but it was- But Bay View wasn't always the same name, but I think it was bought out by this Japanese company, maybe it was Pacific [Advents?] was the company's name. And so, when they bought it, one of the god things was they said "Okay...We'll make changes for the golf course, but this will stay the same. The fishpond will stay the same." And so, that's where we got the, um...the Fishpond Preservation Society. Let Herb take the lead...leading, which was really good. But even back then, you know, I was- I was wondering in the back of my mind. I said "Wow, this company is really good, you know. They've got- They said 'Okay, Herb. You take care of the fishpond.'" But, what I was really uncomfortable about was they were good listeners and everything else, but the bottom line was that the...the Fishpond Society had a 49% say in what was gonna happen.....They still had control...
KELLEN: Yeah...
HIROSHI: That they still had control, yeah...But they were good, you know. They had to let Herb do his thing, yeah. Unfortunately, I mean right after we're fortunate- Right after that, I think the year after...Yeah, 1995, '96, I retired. And I went to Japan for a few years, to work there. And so, all that time I didn't know what was happening here.
KELLEN: Were you, um, from Kāne‘ohe side, originally, or where did you grow up?

 

HIROSHI: Well, I was born and raised on Maui, but I started living in Kāne‘ohe, I think from about '69 or so. First, about thirty years in Kahalu‘u. And then, after that, about 12, 13, years I gotta move to Kāne‘ohe.
KELLEN: So that's, like, right when you started to teach out here? You got here around that time?
HIROSHI: Oh, before that, I think a little bit before that, yeah. But then, when I started- The college started in 1971, '72, yeah. But I was already in Kahalu‘u, living in Kahalu‘u. So, you know, I spent years and years on the Bay, so you know. I know the Bay pretty well, and I've seen the changes in the Bay, you know?
KELLEN: So yeah, I know you described what it was like when over here in '70s-
HIROSHI: Uh-huh...
KELLEN: -and stuff. So yeah...So, how have you- What were the biggest changes you've witnessed?
HIROSHI: Well, yeah, a couple things here. 1) Was like I said, you know, I was just in the ensuing year when the Fishpond Preservation Society was formed. And that was- like when I left, this was overgrown with mangroves, and everything else. You see where they're sitting there?
KELLEN: Uh-huh...
HIROSHI: Right along there, before...There was a cement- cement trench going across. And that briar was growing oysters in there. That's what- There was a first attempt to- to raise oysters commercially. And so, when he decided to leave to go to Kahuku. Somehow, all that concrete was removed and just piled up here, and that- a real mess. So anyway, like I said, this was all mangroves...A whole bunch of mangroves, on this side especially. And it wasn't clean like this. They did a terrific job in restoring the wall, and the- the mākāhā, the- the- the gates that go up the auwai. And it was a complete change. This used to be all California grass. And maybe a shack here or there...
KELLEN: Where we're sitting...
HIROSHI: Yeah, yeah. This whole- Yeah.
KELLEN: Was that before this channel?
HIROSHI: Well this has been there always. Yeah, yeah...This has been there for a while. Yeah...
KELLEN: Do you know if this is Kāne‘ohe Stream?
HIROSHI: That is Kāne‘ohe Stream, yeah, yeah. And it- Always before. I cannot remember, you know? Like, there was, like, kinda had a little something going from here, all the way on the other side of that- that- the fishpond. But...nobody has any record of that, yeah...
KELLEN: And it used to empty into the...
HIROSHI: Yeah. Well, there‘s- They used to empty on the other side, from Kawa Stream, coming in. But they can‘t find out exactly where it was. But, I have an idea.
KELLEN: So, that was traditional, too, yeah? Or...
HIROSHI: Yeah, yeah...The original one, I think, was water came in from Kawa Stream, and I think from Kāne‘ohe Stream somewhere. I don't know exactly...
KELLEN: Where it got channelized...and used to all dump into the ground. And that would- That's what-
HIROSHI: That was a source of freshwater...
KELLEN: So, right now, is there any freshwater?

HIROSHI: Well, we were just talking about that this morning. Informally. And I was saying that there must be some seepage of freshwater coming in here. Because from the students that did the study of

 

the pond, you know, along with the putting the fencing in and everything else, they had stations where they kept track of things such as like the oxygen content, the temperature, salinity. And, when they checked the salinity, overall, the salinity, the average salinity in the pond is about 32 parts/thousand. Whereas, in the ocean, it's about 34 parts/thousand, okay? So, there's gotta be some freshwater coming in. So, I think there's underground seepage from I don't know where, but from one of the streams somehow. And then so, I was talking to Floyd, and then Floyd said, yeah, he looked for the places, but he couldn't find them. But he was glad to see we had all of this data from the students back in the 70s, because he didn't know that existed. And so, part of it was part of the Marine Options Program at Windward Community College. So, he's gonna look it up... Good- Good baseline data, I think...
KELLEN: Cuz, yeah, that... Cuz, like, in the ancient times, or traditionally, would've had a freshwater source-
HIROSHI: Yeah, had to be...
KELLEN: -in the environment for the cod...
HIROSHI: Right, right, you had to have the fresh water. And since, like, even the streams not going in, there's still some fresh water coming in somehow...
KELLEN: But for it to really thrive, ideally, you have a lot of fresh water...
HIROSHI: Yeah, yeah, yeah, and the flow to it, of it going back forth through the ocean-
KELLEN: And in and out...
HIROSHI: But the in and out, we have it now. Because- With the change in tides. If you go there in the change in tides, you can see where the real high tide- the ocean's a little higher, you know? And then, the water flows here. And going out, it goes down in the ocean, and higher here. So there's a nice exchange, you know... But, again, some things that have changed from back then is that, you know, over the years, different types of limu, growing. You know, I said they had to clean it twice a week, or whatever.

And at that time, it was acanthophora. It was an introduced species that came in, you know, after the war, I think. And then, more recently, by recently, I mean 20 years ago, they had this gorilla ogo that came in, and then this place as full of gorilla ogo. But, I don't know what it is, climate change or what, but you don't see that anymore, either, okay? So that's the good news. That overabundance of algae is not there. So...
KELLEN: What is a native type that some people have found in the pond?
HIROSHI: Okay, the native types from before used to be- When we came here, it was the invasive species already, but the one that ogo, the long ogo, the gracilaria, you find it all over the Bay. So, you know, that used to be part of the pond, too. But- And so, as part of the project that they're working on right now, Herb is trying to grow that in tanks, you know. The gracilaria, that ogo.
KELLEN: Within here. I know that I see there's the fish pens over there, right?
HIROSHI: Yeah, but in the tanks. I think he- You see- Right there. You see the blue tanks?
KELLEN: Mmm, okay...
HIROSHI: For now, it's just that, but when the pond is really changed to what he wants to, I think he's going to have tanks in there. To try grow limu. Yeah... In Kahuku, I they're doing that. They're growing that, the limu in a pond. Yeah...
KELLEN: So, traditionally, it would've been, like, mullet in the pond?

 

HIROSHI: Yeah, traditionally, mullet. It's always mullet. Yeah, yeah.

KELLEN: So, and now they're- How- What kind of species are in there now?
HIROSHI: Well, yeah. Well- Right now, I don't know. I haven't looked. But, my guess is pretty much the same. When the students did the work in here, you know, they not only fetched the mullet and put the mullet in, but, you know, they observed the pond, the physical changes. And also, they checked the flora and fauna of the pond, where they're going around and looking and doing their surveys. They found that there were at least four different types of crabs and fifteen different fishes, fifteen species of fishes. And I would think the same ones are still there. But, the other interesting thing too, is talking about matching science and tradition. As I mentioned, we brought the pua ‘ama, the baby mullet, caught out there, brought 'em in. Put 'em in the ocean....

And there was a time when we had the the students had caught some baby mullet, and they were going to put it in there, and we had discussion with an old-timer, because the pond owner had one of his friends. An old-time person. And, like, back in those days, you see a lot of it-
KELLEN: Henry Wong?
HIROSHI: Yeah...So anyways, he- on certain things. Always...What's that?... They kinda looked at the University folks, you know? Like- Like you, for example "You guys are only book learning. You don't know what's really happening. Okay." And so, a good example of that was when we brought some fish in the [sewers?] marked as mullet to put in there and, I said "Hey, that's the wrong kind." And so, one of the- Henry's friends, an old-time Hawaiian guy said "What do you mean that's the wrong kind? That's the kind we always put inside there." I said "That's the 'ama'ama." He said "Oh, come on. You telling me what 'ama'ama is?" You know? "You? You know? From the University, are telling me. We lived here for how many generations." But, you see, what he didn't know, was- you know, over the years, you've heard different species being introduced, right? Like taape and fishes like that. Tilapia are coming in. In one of the cases, when they brought in some- I think it was the Marquesan sardines or something, there was a few contaminants in there. And one contaminant was this mullet called a summer mullet. Looks just like the 'ama'ama, okay? But it's called a Summer mullet because it spawns in the summertime. But this whole time, I didn't know that, okay? Cuz they had just kind of brought it in not that long ago and it was just starting to establish itself here. But the disadvantage of the Summer mullet is it doesn't grow larger than about six or eight inches long, whereas the 'ama'ama is big. You don't wanna stock it with the Summer mullet, then compete for the same food with the 'ama'ama, okay? And here, again, is a good example of what we can learn from tradition and what we can learn from modern science. Yeah...

***[Scientific Knowledge and Indigenous Knowledge]***
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KELLEN: Cuz...It would've- If you had put it in there, it would've been invasive...
HIROSHI: Yeah! I'm sure there's in there now. They're in there right now, okay...
KELLEN: Wow...
HIROSHI: There's many in there now. But the point is to put it in there deliberately, that's not too good. But yet, you know, there's a kind of a clash there. But the point is the students are learning. You can

 

learn from both ends. On the other side of it, you ask me "What other kinds fish are in there?" On the mākāhā, there's the gates, you know where the auwai go out, in and out. Usually congregated in there, when there's change of water, is a lot of pufferfish.
KELLEN: Pufferfish?
HIROSHI: Yeah. And one of the things that students did in here was that, again, part of learning, is to... "How many do you think?" "Oh, I don't know, plenny yeah?" "But...Can you tell me more than 'plenny?'" And so, what they did was they caught some pufferfish, clipped the fins to tag them "So these are the ones that we caught." Catch, maybe 40, 50 of them, tag it, release 'em. And then, maybe a month or two later, catch 'em again. And see how many are tagged. And by seeing that, they can estimate how many are in the pond.

Okay? And so, they did that, but while they were doing all of that, then, we had a good friend that used to run a fishpond in Moloka‘i. That was his job. He and his wife lived at the fishpond, and he took care of the fishpond. And so, he knew a lot about fishponds. And so I was talking to him about the pufferfish, and he said "Oh yeah. We have 'em all the time." So, and I asked him if he knew how to clean it. He said "Oh yeah, yeah. Sure." Well, I said "You know, would you teach me how to clean it?" "Oh yeah. Sure."

So, I remember we had him over for dinner once. Must be Thanksgiving or something. But before he came over, I came here and I got a dozen of the pufferfish, okay? And so...I- I took it home, and he showed me how to clean one. I follow, and then he said "No..." And then, he'd point something out. Then he cleans one, I clean one, say "Okay, okay..." And then, I remember, he cleaned three, I cleaned three. And you know, we ate that thing. It's really good, okay? But the other thing, the long story about what I'm getting at, was that one of the things that when you eat the pufferfish is the pufferfish you have to clean it in such a way to remove the poisons. And this guy back then, the authority on poisonous or dangerous marine animals was this fella, Halstead. He just- He was a Navy doctor, and he wrote a book on dangerous marine animals, and of course, the one of the things he had in there was pufferfish. And he was saying three things are poisonous: the gonads, the skin, and the liver. And so, he- he had a seminar in Guam, I remember, and he was talking about that with so much authority. And so I said "Doctor, how is it if the liver is so poisonous, how can the people in Japan eat the liver, and not be affected by it? But be affected by the [indiscernible]" And he said "No, they don't eat the liver. If they eat the liver, they'd be dead." But I know for a fact that they eat the liver. *laughs*

Yeah, but- No, for the sushi, it's usually the flesh, grilled, thin, thin slices. They make the real nice sashimi, almost paper thin. But the- But the liver, they use for soup. Make a soup out of it. And we did the same thing. When that one time they showed me how to clean the fish. We ate- We ate the liver. The liver with the soup, and it was good. And the reason that they can do it is, my take on it is, I think that poison is water-soluble. So I remember when we were cleaning the fish, we always had the water running, the water running, like this, cleaning it like that. And of course, we skinned it. The skin is poisonous. We had no part of the ovaries, you know, as expected. And of course, the gland. We removed all of that. But the liver itself, after we rinsed it, and rinsed it, and rinsed it, and rinsed it, gave the [indiscernible]. But then again, here's the difference between tradition and the-

 

KELLEN: The academic knowledge...
HIROSHI: -and the academic knowledge. Yeah, right. And in this particular case, the academics got one wrong, okay? And he spoke with so much authority. That's why it turns off, I think, a lot of the, you know, the local, hands-on guys. So on the parts and practice of fishpond, they're running two sides. You got folks who are top-notch scientists, you think, Floyd. He's done work in Europe and Athens, and all kinds of great stuff. You take Hal, you know, and he's got a tremendous background, okay? Dave also, PhD in Zoology and everything.

And so you got these guys that are so good, and yet, you know, combine with some of them the local knowledge, traditional knowledge. You don't find that too often. And you have it right here, in that fishpond. And the only thing, too, is...Oh! Maybe one of the reasons that I was asked to go on this one here is that when I first went to-to Windward and one of the college- one of the, like, courses that I started- I started several classes. One was an Ecology class where instead of labs, every lab was a field trip somewhere, and learning about things, and like, going to sewer plants and seeing exactly what happens at a sewer plant. And the students would know the difference between the secondary plant and a tertiary plant in Ahuimanu, or a primary treatment plant. And they would also have the first and other sequence.

So it was mostly field trip like that. And also, the other class that I started was a Zool 107 Fish Identification. So, for the Hawaiian fishes, and- but you know how with the- take the classes. On field trips, catch fish, identify, and also learn, by looking at the fishes, you know, one of the special adaptations that allow the fish to live in that particular environment. And the crabs here are a good example, too. You know, I don't know if you look at sealife very much, but...
KELLEN: Not really, no. Not too familiar.
HIROSHI: Okay, next time you look at, well, crabs- You know the song about the a‘ama crab, right?
KELLEN: No...
HIROSHI: Just laying on the rocks, and you look at them. The a‘ama crab is flat, it's black, it's light, it looks just like a rock and it can move fast because it's light, and that's it's advantage. In the ocean, there's a crab called 'ol 7-Eleven crab. Big, thick, heavy shell. Moves very slowly, but it doesn't have to move that fast. It just stays in its environment and the shell is so thick that, you know, if you're just gonna spear it, it'll bounce off, you know, just with my hand. And so, in its environment, it has, you know, its own adaptations. And so, these are the kinda things that we teach the students. And the fishpond is the perfect laboratory for the outdoor laboratory, a real laboratory. And you can see there's different animals and see the differences in the- in their structure and like, even with the crabs too, like a- the white crab. It's a swimming crab, so the lass legs, are like paddles, modified into paddles, and they swim. The Hawaiian crab, which is in the mud has eye stalks, hooked-up with an eye on the top.
KELLEN: So it can scout at us...
HIROSHI: Yeah, so it can stay in the mud, you know. These are just some examples of things that...
KELLEN: How they can adapt....
HIROSHI: Yeah. And then, right, by just looking at the animal, you know what kind of environment it is, or...Yeah, yeah. And so, this laboratory-like- this is a hands-on laboratory that students have access to...

 

KELLEN: So...So, yeah. How did you get started here, with...with Herb? You just knew Herb through the Rotary Club, and he approached you?
HIROSHI: Yeah, uh-huh. Like this: we talked it formally. And so...Yeah, yeah, yeah...
KELLEN: So you were here from the beginning with Herb them?
HIROSHI: Actually, I was here, you know, 20 years before Herb, you know. But then again, it's strange, you know, how people meet...
KELLEN: Yeah...
HIROSHI: Yeah, yeah...
KELLEN: So you- you had already known him through, and you started this, so you...? HIROSHI: Yeah, yeah...
KELLEN: You all worked together...

***[Role in Preservation Society]***
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HIROSHI: Uh-huh, yeah...
KELLEN: And so, what was your role within the, you know, Preservation Society?
HIROSHI: Well, at that point, I was just...listening and see, you know, what kind of input we could add, because at that point it just started, and they're looking at different things to do, and how can we preserve the fishpond. But- But I just started and like I said, I retired from the College and I went overseas for a few years...
KELLEN: And then, when you came back, how did you help?
HIROSHI: Well, when I came back, I didn't do anything. I, you know, I just...I was completely retired. You know, I was doing my thing elsewhere and then, I just heard about it. I got a call from- Yeah, I got a call from Herb, I think. And so, Herb said "You know, they're- they're doing some things about the fishpond. And they're trying to get some recordings and some historical background on it. Would you be willing to be a part of it?" Well, Herb gave my name to Doug [Dykstra (WCC Chancellor)], and Doug called me, but- but I guess Herb remembered that I was one of the original members of the Fishpond Preservation Society...
KELLEN: So you weren't really doing much, like, of the clean-ups and stuff?
HIROSHI: No, no. That's why I was surprised. I mean, pleasantly surprised, because it's clear, clear of mangroves, you know? When we were here, you know, we knew that mangroves had to go if you were gonna have a viable fishpond. But how're you gonna do it? You know? It's a horrendous job. *laughs*

And the fishpond walls, too. You look at it. They did such a nice job in fixing the walls up. And they- they did a lot of nice work in clearing this place all up. And making it so it's an attractive place where people can come. And there's been a lot of vol- volun- volunteer help, and they wouldn't come to a, you know, crappy, ugly place. But this is a real nice, attractive place. You know? It-It's inviting, yeah...
KELLEN: This is actually my first time here.
HIROSHI: Yeah, yeah... You get a nice feeling, being here. Yeah...
KELLEN: Yeah, I've only, you know, seen it online, or in pictures. This is great to be here...

 

HIROSHI: Yeah, right, yeah... And so...That's- Yeah. Just a lot of changes. On the fishpond itself, they did such a good job. And it goes along with everything else, though, that's nice here, because in the Bay, in the 60s... In fact, right here, Kāne‘ohe Treatment Plant -It's right there- It was a treatment plant. And the sewage from the secondarily treated sewage went straight out in there. About- Maybe about two million gallons a day. From Coconut Island, another million gallons. The Marine Base, another million gallons of swill. Across from Aikahi, maybe about four million gallons a day. All in that-
KELLEN: In the Bay...
HIROSHI: -pocket right there, where the circulation is so slow. And in the seventies, mid-seventies, they rediverted everything from here, from Marine Base, Aikahi, all the way out Mokapu Point, straight out there. Past the point out there... And within a week, I could see changes.
KELLEN: Like, the color of the water and everything?
HIROSHI: Before that, you know, you go out on a boat, and you can see patch reefs here and there, okay. While, like where the post is, you can see slight change there, yeah? Okay. The water's a bit different. This isn't a clear day, either. But, before they moved the sewage out on the other side, it was all one color. You couldn't see anything...
KELLEN: It was like...nasty colors...
HIROSHI: Yeah...But it was- it was changed. Just in a day...
KELLEN: How'd that impact the pond?
HIROSHI: Oh, yeah. I'm sure it- cuz the same water going in, back and forth, yeah...
KELLEN: So it's healthier now?
HIROSHI: Yeah, I would think so, yeah. But they...
KELLEN: So, when they would be doing the original testing of the environment that was with the sewage, or is that? It's a little after...
HIROSHI: That's after, because before that, because they moved the sewage in the mid-70s or so. Well, that's- that's kind of close there. The timing was pretty close. Just about that time, yeah. So I, yeah...Maybe it was right after they diverted the sewage, yeah. Could be, yeah...
KELLEN: So, yeah. When you guys started work here, it was after that?
HIROSHI: Real close, though, yeah. I never thought about that. But, yeah, it was real close. But, back then, the good news was- You know, it wasn't when it was all same color, it wasn't nasty, or anything. What it was was that because of the- The sewage was treated. So the Bay, especially this part, was nutrient-rich, okay, with all this algae and whatever that was just blooming because of all the nutrients in there. Yeah. So it wasn't like chemical pollution, or anything like that. But then, back then, there were a lot of fishes that we don't see now. There were a lot more nehu. Then, there's other fish, like ‘ōmaka that feed on the nehu. You hardly see 'em anymore. *laughs*
KELLEN: That's cuz, yeah. The nutrients fed the, like, the limu, which the fish feed off, yeah...
HIROSHI: Yeah, or ‘ōpio, or the small fishes, and the big fishes eat the small fishes.
KELLEN: The light- or the food chain, yeah?
HIROSHI: Yeah... So, but still, I'd rather have it this way. All clear.

KELLEN: Yeah...It's just...It's nicer and... Do you know any, like, stories of uncovering any hidden features of the pond?

 

HIROSHI: One hidden features? I don't think so, but you know, it's-it's interesting because- That a gentleman I thought to- I thought- I mentioned before about running a pond on Moloka‘i. He used to tell me how they were- There was a big eel, a huge, giant eel, in the fishpond, you know, and from time to time, and it would disappear. And he was talking about some underwater cavern or something that he never could find. And anyway, in this pond here, I've heard about a big eel, or two, in there. Which we never did see, but, you know, people have said. And this pond, and other fishponds as well, about how big eel. And so, the idea of maybe there's some underwater passageway. But we can't find it. They haven't seen it. But yet, if you look at the pond, sometimes, if you see ulua that are so big, that during low tide, the back would be sticking out of the water as they're swimming around.
KELLEN: Oh, yeah?
HIROSHI: Yeah...
KELLEN: Wow...
HIROSHI: Yeah...And, the...
KELLEN: There's only, like, two feet deep...
HIROSHI: Yeah, it's about two feet deep, but with that low-tide, super low-tide. It gets...
KELLEN: High-tide is two feet...
HIROSHI: No, the mid-tide is two-
KELLEN: Oh...
HIROSHI: Yeah, yeah, yeah...
KELLEN: That's like the average?
HIROSHI: Yeah, yeah...But...
KELLEN: So low-tide- it might be like, one-
HIROSHI: Yeah, maybe, yeah, yeah. Like....But you don't see 'em anymore. And even then, when they were there, sometimes you see 'em, and sometimes they don't, you know. Where did they go? We don't know. And there was a time when- I don't know how- how it was, but when in here, there was a whole school of big āholehole. Real big ones. And you usually don't see 'em in here. But where'd they come. I don't know. They just happened to pop up....*chuckles lightly*
KELLEN: Yeah...They got in here somehow...
HIROSHI: Yeah, I don't know how, but...That's interesting. From time to time, you'd have some big, or many fish....Different kinds...

KELLEN: So, uh, what can you tell us about, like, how this area was in, like, in the ancient times, or traditionally?
HIROSHI: Well traditionally, there was- Well, they really took care of the pond. Yeah. They really took care of the pond. So it was like a community type effort. And, uh...
KELLEN: It was...bigger, too. Yeah?
HIROSHI: Well, it depends on where. Some pounds are real big. Like He‘eia is several times this size, okay. There are smaller ponds as well. There are different types of fishponds. Some were like freshwater, some were just...by sand. Just, you know, happened to be an inlet, or something, and there are different types of fishponds, but most were like this type here. What with the stone walls, and the water could go in and out through it. But there are folks who say that "Yeah, maybe we should make it like Moloka‘i. Make it self-sustaining." Which is a good idea, I think. And kids learn from it, too. But to

 

be a source- A main source of food- Maybe on Moloka‘i, it might've been like that, because of all the fishponds, but in a place like this, I don't think- This is just my own personal feeling- I don't think it was a major source of food for the populace. Okay? I think it was more just for the ali‘i... If you think about it, too, the time it took to maintain the pond, and it was a community effort. So you had to have somebody who was really strong and well-respected to be able to get such...
KELLEN: Yeah... To get all the people...
HIROSHI: A mass of people to come as- "Okay. Together, we're gonna clean the pond." You know? And they did. They did it very efficiently. Yeah...
KELLEN: So they had to be, like, ali‘i who could-
HIROSHI: Oh yeah.. you would have to be...
KELLEN: that could organize something like that, yeah?
HIROSHI: And it was, of course, but the point is that it was very, very time-consuming, you know, for what you got out. They got a lot of fish, but if you took it...A time-cost basis, it wasn't efficient. But for the ali‘i, it was great because they had a ready source of food for...
KELLEN: Yeah... This is dated back to, like, maybe 1700 or so, yeah?
HIROSHI: Yeah, way back, yeah...
KELLEN: This is before Kamehameha arrived. A year, at least, yeah?
HIROSHI: Well, I don't know about before Kamehameha was here, but before before Captain Cook came anyway...
KELLEN: So yeah, this would've been, like...Yeah, for the ali‘i and...
HIROSHI: Yeah... because this whole area- In fact...I think, I may be wrong, but I think Kamehameha liked Kāne‘ohe.
KELLEN: Yeah. I believe they lived in Kailua.
HIROSHI: Yeah...And the Mokapu, yup...
KELLEN: Huh?
HIROSHI: Where the Marine base is? You know...
KELLEN: Ah, the peninsula, yeah...
HIROSHI: Yeah, that peninsula there. It's, uh, Mokapu is, uh, like moku kapu. The kapu land, you know? And so it's like a place where the royalty stayed as well, yeah...

KELLEN: Um...Yeah, so...Why do you think preserving the fishpond is important for the community?
HIROSHI: Well, for the community? It's...It shows in many, many ways, where they are from. Where the people were from, you know? Their roots- Their roots is in a place like this, in the fishpond. And as some folks were mentioning this morning, in this morning's discussion, you take kids that are in high school now. Have no interest in science, or school in general. And you bring 'em here. Bring them here, and show them- Better yet, get 'em in -hands on- and getting dirty and working, in the pond. And to get them to realize that...their ancestors built this. Not somebody from a novel. Their ancestors built this. And they look around, and the more they see what makes the pond more- You know, the more they get- They have a personal connection to it, and this is the start of learning more. There's meaning to the learning. It's not just something that "Oh, the teacher said..."
KELLEN: Yeah, you get to see it, yeah...
HIROSHI: Yeah- See it and feel it, see it and feel it...

 

KELLEN: Not just words and pictures in a book. It's...real...
HIROSHI: Yeah...

KELLEN: Were you involved in any of the teaching programs out here or, like, any of that? Like the...
HIROSHI: No, not here, but when I first started... Yeah, uh, well, yeah- We used the fishponds in the... like in the classes that we had, where we'd take field-trips out, you know, to different places and they could [delve?]. See why the place is important to- to the...the ancients. Like...Like I don't know how much you know about Kāne‘ohe. You’re from the other side-
KELLEN: Yeah, I am.
HIROSHI: This place right down, around the corner, called Kāne‘ohe Beach Park. That used to be just fresh and just- the people laugh, "Why did we call that 'beach park?' But then that's... I think it's- the Hawaiian name is Na‘oneala‘a. Or...La‘a Kai... La‘a from Tahiti came, and it was a very important place. You know, historically, where he brought his drums for the first time. They heard drums here. And, yeah, that's the first time they heard it here, was in Kāne‘ohe. And also, where... where he landed and something else happened, but anyways, that's a very historical place. And going around, and going there and seeing what happened and why, even further up at Kualoa, and the significance of Kualoa... Being there is different from just reading about it, yeah, and you can see where things have happened, yeah. Walk on the same sand that the ancients walked on...
KELLEN: Yeah- I mean, I read that one- the story about the drums.
HIROSHI: Yeah, and it was down right there. Yeah, yeah...
KELLEN: Right on Kāne‘ohe Bay, or Beach Park...
HIROSHI: Yeah. It's called Kāne‘ohe Beach Park. But it's- It's really the Na ‘One A Laa...The Sands of La‘a.
KELLEN: Cuz that was done [indiscernible].
HIROSHI: La‘amaikahiki...
KELLEN: Yeah...
HIROSHI: The chief that came here from right through there, down there...
KELLEN: You know any other stories associated with the pond or the area?
HIROSHI: With the...As I was listening to Herb, you know, that's one of things you don't do with the pond, is defile the pond. And- And so, I was telling him the worst thing that could've happened was put some sort of treatment plant right there. Cuz, especially when they used to have overflows, you know, before. They couldn't handle sewage. It would overflow, go in the stream, go in the pond. And that used to be terrible. So, we're in the right direction, but at least we got rid of that. You know, the sewage treatment plant was no longer there. And more importantly, I guess, is the awareness of people, you know? You know, what a precious thing that we have in the pond. And- And people are starting to appreciate it more. Because before, they'd just see it, and you know, they don't think much of it. But- But as something that has been there for hundreds of years, and with the effort of the ancient people for- Many, many hands made that wall, as an example.
KELLEN: Um...
HIROSHI: Yeah...

***[The Future]***
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KELLEN: What would you like to see for the future of the pond?
HIROSHI: Well- The pond- The pond is- Taking care of the pond and getting it more well-known, so people can appreciate it more. And Herb's already. He's done a great job. And he has plans- Oh yeah! The other thing, too, is, like, you know, before it was part of the golf course, and the society had a 49% say, but now its completely in the hands of...
KELLEN: Pacific American Foundation...
HIROSHI: Yeah, yeah. But that...Right so, the Foundation owns the pond now. It's the Foundation's pond. So, it's gonna- It's gonna be okay. Okay. But the- But the question is- And also, he's using it as a learning lab, so its really, really good, because realistically speaking, we cannot make this pond- this pond productive enough to feed Kāneʻohe, let's say, okay? But we can use this pond to teach others how to do things and how to respect the pond, and there was something else I was gonna say. I forgot. others how to do things and respect the van, and it was something else. I .and also to be able to anticipate things that might affect the pond. That...
That is not a problem now. Okay?
KELLEN: Yes. Before it can come up, yeah?
HIROSHI: Yeah, and it will come up, okay? Because with global warming and changing of the tide levels...
KELLEN: So they have to...
HIROSHI: I don't- But anyway, without getting solutions, these are some problems that may happen, okay? And also, with global warming, you know, the storms are getting worse, too. So it's not only the rise of the sea level, but storms might coming in- Tsunamis. You know, tsunamis could come just wipe this whole thing right out, right? Okay. It could, yeah. It hasn't, but it could. And so, if unexpected things happen, that- Are we training, teaching, educating our young people enough that they can be versatile enough to solve unheard of problems? Unanticipated problems...
KELLEN: Get 'em ready when these occur...
HIROSHI: Yeah, whatever it might be. But the thing is, teaching them so they can be flexible enough to solve different problems that we don't even think about now. That's really important.
KELLEN: Yeah...Yeah, tsunami or something, yeah, it could go really damage [indiscernible].
HIROSHI: And we already saw it, because up until recently, we didn't have king tides, okay? And the walls were made for the old days. But when the king tides came, it came over the walls.
I wasn't here, but Herb was telling me about that. So now, he's built the wall up higher, okay? Yeah...
That's just one example, yeah? A small example, but yeah...

KELLEN: What about the Keana Pond, the keiki pond?
HIROSHI: Oh, yeah! That's interesting...They talked about it this morning. You know, where two guys, archeologists- archeologists- Hal's an archeologist, and Floyd is a geologist, okay? And they were talking about- like this pond here, so you get a core sample. You could see the geologic history of what happened...you know, hundreds of years before. And these- It's like a history book, yeah? And- And then they mention the keiki pond would be even better for that...
KELLEN: To try to research, yeah?
HIROSHI: Yeah, to- to- to get a core sample going all the way down, yeah, yeah...

 

KELLEN: Yeah...I haven't really done archaeology, but I find that all very interesting *both chuckle* Some of it's over my head though.
HIROSHI: But the idea of the keiki pond is really good, because I don't know exactly how it was, but when we were- when I was at Windward, we used to raise, work with, prawns. And, um, we had a keiki pond. And when the prawns first hatched, when they weren't little, about this big, and then we'd put them in a big pond. But- And they could've been doing the same thing with the pua ‘ama. You know, putting the small mullet in the keiki pond, and then bringing them over here. Because...
KELLEN: It's safe. Nursery. You got no predators and stuff. Yeah, like- Yeah, that's smart.
HIROSHI: And it's easy, too, because it's closer to- closer to the ocean.
KELLEN: Yeah, that's part of it. Like...Traditional, like, way that they...It's, like, we have our modern words for [indiscernible] nursery, or something. Like, a traditional [indiscernible].
HIROSHI: And also, along with that, and depending on where you are, some things work and others don't. Um...The big problem here was mangroves. Getting rid of the mangroves, okay? If you go to Florida, the mangrove is a valued plant. Because in the estuaries, that serves as the nursery for the young fish and crabs and whatever. You know, they can hide in the roots and everything else. And when they get big, they leave. So, in- in Florida, you have a heavy fine for cut- cutting down mangroves.
KELLEN: Oh yeah? *both chuckle*

HIROSHI: Yeah, and here, you know, it just doesn't work. So, you know, there's a balance, you have to know what works where. And it's- it's not a native plant. They- The sugar planters brought it in. In the, I think, 1920s, in Kaua‘i. To hold the soil in different places. So for that purpose, it worked okay, but somehow for here, it's not working. But other places, it works well.

KELLEN: Cuz...Well- Like- What was the area before, like, agriculture...
HIROSHI: Yeah, and- and that's the other thing, too. See, because- No, no, no, no. What- What was here before was- From here, you know, where the sewer plant is, and further on up, what that originally...It was lo‘i, taro patches, All the way through. And that was really good, because whatever kind of things that came from up above, mauka side, will go to the lo‘i. And the lo‘i would sort of filter everything. And the water would go through the lo‘i, and come here, into the pond. Nice, fresh, clean water coming into the pond.

KELLEN: So, like, the, like, runoff after a storm... Where‘d it all get filtered out, before- So this place would stay clean...
HIROSHI: Yeah, right, yeah. And then they're all for that, Kawa Stream and Kāne‘ohe Stream, that would come in here, too. But the lo‘i served that purpose. All over- All over the land, okay? And then, from there, I think it was maybe, nice, but it was still okay. Okay?...But then, after it was paved over, what do we have? You know, pesticides from yards, construction mud and everything. Doesn't get to be filtered, goes straight on out. Straight out in the ocean. In the pond, and straight out in the ocean. And you see the- Like Kāne‘ohe. I remember, when I was at the college, there was a place that was just pasture land. California grass. And so, any kind of runoff would go through the pasture, get filtered through the pasture, and then move out to the ocean, okay? Storms and anything else...Now, that place that I'm talking about, is paved away. It's called Windward Mall...

 

KELLEN: *chuckles* Oh, yeah?
HIROSHI: Yeah, and so, when the rains and floods come, from here, just goes hu-whap. Right in the ocean.
KELLEN: Yeah, and it carries the- the dirty stuff, huh...
HIROSHI: Oh, yeah, everything.
KELLEN: From the roads, the oils and stuff...
HIROSHI: Oils and stuff. And a big thing we don't think about too much is- Every yard contributes a lot by pesticides and fertilizers and things that are not natural in the Bay. And all of this just goes right into the storm drains. And right in the ocean. Yeah... Where as with the lo‘i, sees it filter in the ground.
KELLEN: Yeah, like a buffer, yeah?
HIROSHI: Yeah, yeah, yeah...
KELLEN: Um....So, um, yeah- What can people do to, like, help the fishpond, [in terms of?] preservation?
HIROSHI: Oh, the preservation?... Yeah, the first type is appreciation of the pond, yeah. And getting the pond to be a part of themselves. And I think we're on the right track, because...in the past, you know, when they had volunteer help, that folks would- A lot of people would come. To volunteer... In the past, they might not have had any interest at all, yeah... So, it has to be a community... a community resource.
KELLEN: Yeah...cuz yeah. That's what it was traditionally, yeah?
HIROSHI: Yeah, well-
KELLEN: A resource for the community...Gotta get everybody back, involved.
HIROSHI: That's right. Yeah, yeah...
KELLEN: Aware of...
HIROSHI: It has to be a- It has to be a community involvement. Community appreciation, then involvement. They wouldn't be involved if they didn't appreciate the pond... And so I think this is...Herb's doing a great job when starting that point... ut uh...yeah...
KELLEN: Let's see what else- So, um, do you recall there was a plan to build a golf green in the middle of the pond?
HIROSHI: I don't...01I don't recall that at all. No, I don't- I don't know where they came up. Because- Talk to Herb, because, you know, with the Fishpond Society, being involved in with
Atlas building golf course, they would not have put up with that. At all. Yeah... So I- So I don't know where that came up from. Yeah...
KELLEN: Must've shot it down quick when it was- if it was brought up, yeah?

HIROSHI: Yeah, and the other thing, too, that's really interesting that wasn't mentioned, but... The- The balance of science and practicality, yeah? And Dave Krupp, I don't know if you met him, he's a-
KELLEN: No, no. I- Only today, I just sort of met him...
HIROSHI: He's, uh- He's been one of the professors at- at- at Windward. And what he did was when he was younger, maybe in graduate school, or maybe just started teaching...What he did was, uh- he did a lot of stuff in the ocean. They did surveys and things, and uh- Maybe it was here, I don't know... Somewhere around here. What he did was he- You know, in one of the things you do in Marine Biology is you run a transect, a line going up, and to see what kind of...sea life is along that line, okay? So you got the plants, fishes going by, and snails, and whatever. And he was creative, and what he did was- I gotta talk to him about this... This was maybe 30 years ago he did it, he probably forgot about it. But

 

what he did was he ran a transect somewhere around here, maybe it was here- I forgot, I gotta ask him. And what he did was- when he ran the transect, instead of looking at seaweed, snails, slugs, or fishes, he looked at golf balls, okay? With the- Along the transect, counting the number of golf balls he had. And so, his conclusion was...If you use the same rationale looking for invasive species, the golf balls would represent an invasive species that was a real big problem. *laughs* Because I don't know how many he found, but the...
KELLEN: That was- That was on the outside of the wall?
HIROSHI: Yeah, in the ocean itself. Yeah, yeah, yeah, yeah.
KELLEN: That's a far...off shot...
HIROSHI: Yeah. So, I don't know he got that- where, but yeah- exactly where. So I got ask him about it. But the point was he uses a method of science to- to- to demonstrate something that was practical, you know? Saying that- Not that you got too many golf balls, or what-
KELLEN: That's exactly what- something that's not supposed to be there...
HIROSHI: Exactly, yeah, yeah... And it's not just one or two, but it's a major problem, you know? You got way too many...
KELLEN: Like, it's more golf balls than fish, or something. Or... So, I don't- I see this here- I never really heard of it, but do you know what ethnomathematics is?
HIROSHI: Ethnomathematics? I guess...I'm not sure what they're drive at, but...
KELLEN: I'm not sure- It's just like- This is just one of the topics [they] gave us to, you know, try and cover...But yeah, it's just, you know, ethnomathematic lessons? I'm not even sure- I shoulda googled it…
HIROSHI: I don't know- Maybe he's talking about the- with the...the probability of different people living in different- in an area, or what? I don't know what...
KELLEN: Yeah, I should google it later when I get...Okay.... So, um...Were you involved in developing any of the curriculum that they teach here, when students come?
HIROSHI: No, that was after my time. Yeah, after my time...
KELLEN: So most of your involvement was, like, from the very beginning?
HIROSHI: Yeah. Yeah, yeah. The very beginning. Yeah, yeah...
KELLEN: Um...I mean, I feel like we covered all the...
HIROSHI: Oh sure. Yeah, yeah. We covered- we covered...
KELLEN: So I'm not sure...
HIROSHI: That's fine *chuckles*
HIROSHI: We covered that...
KELLEN: We- Lot of great stuff. Like, a lot of great stories. Thank you... So...
HIROSHI: Yeah, yeah... Some people talk a lot. I don't *laughs* So...
KELLEN: No, no. Good, good... Got a lot of good information...Yeah, I figured, you know, a lot of these topics are not for everybody....
HIROSHI: Yeah, yeah...
KELLEN: But, yeah. I think we discussed....
HIROSHI: Yeah, we got it....
01:17:28.200 *End of Part One audio*

Part Two (Separate audio file)

 

***[Students' Independent Study Projects at the Pond]***
(restart of timestamp of Part Two: 00:00:00.500 --> 00:04:11.100)

HIROSHI: Yeah, well, was- Along with working in the pond- You know, the hands-on, getting dirty, and something else, they- they learn a lot of teamwork. And that's what- what one of things that was so important in the old days. They have to work together. And one example that was not expected, and I thought was really neat, was when we were pulling the nets in, heavy nets, either through the pond, getting fish -or outside- either pulling or pushing. And one of those students on the project, it was a Samoan student...So...He had a Samoan chant that everybody sang that chant *[mimics chanting]* *laughs* And then, working together, with the Samoan chant. So I thought that was something that was real neat. Yeah...
KELLEN: Yeah, that's cool. I mean, yeah... I mean, yeah, just team effort.
HIROSHI: Yeah, just a real team effort. And when you sing together, or you chant together, it brings everybody together. And that- that...
KELLEN: The same page, the same rhythm, and all that...
HIROSHI: Yeah, exactly. Yeah, and we had that here.
That- I didn't even think about it, but yeah...So many things happened, and this is just, you know, again, this is just one example. Yeah... And one of the guys who worked in the pond too, was- I haven't seen him after he left. You know, just a young kid out of Kailua High School. He was a real friendly, nice kid and over the years, he's been I just see his name every once and a while. A very important guy in the seafood production business, yeah. Downtown, they sell...
KELLEN: Oh, that's cool. I mean, if it all kinda started here...
HIROSHI: Yeah, yeah... or part of his journey was here...
KELLEN: The learning of the fish, and the learning of everything to do with it.
HIROSHI: But, at least his interest in fish maybe developed...
KELLEN: And it helped to, like, you know, to get that hands on experience.
HIROSHI: Yeah, yeah... And he and the guy that wrote the final paper, that we have, everybody was responsible of writing up their own project paper, but he and the fellow that wrote the paper that I have a copy of, they're real good buddies and from high school they used to go out on the hobie cats together and *chuckles* and so... And so this one guy ended up writing a good paper. The other one ended up as a, I think a president- a CEO of the big seafood company downtown.

KELLEN: Wow, that's crazy. So did the, um- They wrote up a paper; did they, that program, that class or something, continue after?
HIROSHI: Well, this was, what we had, was an independent study project...
KELLEN: So not really for credit?
HIROSHI: It was for credit, but you could pick with an advisor, what you wanted to do.
KELLEN: Oh, okay...
HIROSHI: And this was one of that. An independent study. Eight folks got together and on their own, decided to use the pond...
KELLEN: So that didn't become, like a, like a, um, a recurring, like, class at-

 

HIROSHI: No it- No, yeah it... Following that, there was a thing, a class on the on fishponds or something, but after I left. Yeah, yeah...
KELLEN: So yeah...Gotta start somewhere, right?
HIROSHI: Yeah, yeah...
KELLEN: That's cool... All right. Well, thank you for sharing.
HIROSHI: Oh, no problem
00:04:11.100
*End of Part Two audio*

[Transcription by Kauilaokahekiliokalani (Kauila) Freitas-Pratt, Student Assistant Transcriber]

[Keywords: ahupua‘a, Henry Wong, Independent study course, Keana pond, mullet, Na‘oneala‘a, navigation class, nehu, ogo gracilaria, ownership, predators, preservation society, pua ‘ama, pufferfish, sewage treatment plant, teamwork]

T = Timestamps of Vignettes

PART ONE

| | |
|---|---|
| Hiroshi Kato’s Introduction -Windward Community College | 00:00:04.500 --> 00:17:35.00 |
| Start of Waikalua Loko Fishpond Preservation Society and Changes in the Pond, Tradition as Well as Modern Science | 00:17:35.00 --> 00:31:31.000 |
| Scientific Knowledge and Indigenous Knowledge | 00:31:31.000 --> 00:41:35.300 |
| The Future | 01:00:08.900 --> 01:17:28.200 |

PART TWO - restart

| | |
|---|---|
| Students’ Independent Study Projects at the Pond | 00:00:00.500 --> 00:04:11.100) |

*Single photo caption:*
Hiroshi Kato, former Dean, Windward Community College, Pacific American Foundation

*Group Photo caption:*
(L to R) Hiroshi Kato with Floyd McCoy, Dave Krupp, and Hal Hammatt at October 2021 Interview at Waikalua Loko I'a, Pacific American Foundation

 