



**Deborah Keller
Oyster Mom
Tallahassee, FL**

Date: May 14, 2021

Location: Oyster Mom Warehouse, Tallahassee, FL

Interviewer: Annemarie Anderson

Transcription: Diana Dombrowski

Length: One hour and two minutes

Project: Saltwater South: Forgotten Coast

[00:00:00.00]

Annemarie A.: All right. Today is Friday, May 14. I am in Tallahassee with Deborah Keller, Oyster Mom, at her warehouse. Would you go ahead and introduce yourself?

[00:00:15.26]

Deborah K.: Well, I'm Oyster Mom. [Laughter] I have been farming oysters since 2015. I was very involved in launching the oyster aquaculture program here in Florida by supporting the state and Tallahassee Community College in securing the permits that we would need to actually put oysters in the water in water column oyster aquaculture equipment and grow them commercially.

[00:00:51.09]

Annemarie A.: Thanks! I want to get into that, but first, I'm going to ask you a little bit about your early life. Could you, if you're okay with it, give us your date of birth?

[00:01:01.09]

Deborah K.: I was born in 1954. I was actually born in Coaldale, Pennsylvania, and I am the daughter of a coal miner. My father decided that he didn't want his daughter to grow up with navy blue knees, which everybody has in the coal country, because when you fall down on coal soot, you never get that soot out of your knees. It's in your skin, and so you have navy blue bruises forever. So, we moved when I was very, very young to Williamsport, Pennsylvania, which is the home of our Little League Baseball World Series. We're also on the Susquehanna River, a big lumbering town when it started. So, I

grew up in Williamsport, and I left Williamsport as a foreign exchange student, first to Germany and then to El Salvador during the civil war, which was a life-changing event for me. I went to college in upstate New York, and I started out doing sociology. Because of my experience in Central America, I had worked for a place called Casa de los Pobres, but then I fell in love with birds, so I changed and became an environmental studies major and graduated, as it ended up. I started out at Hartwood College, moved to State University of New York in Oneonta, the same town, and got an environmental studies bachelor of science degree. Then I left there and started trying to find a job in environmental studies, which was nonexistent, very difficult. So, I became an assistant resident director of a home for old ladies in a coal mining town. I was twenty-one and a little bit wild, and it was really not a good match for me to be sleeping with twenty-four old ladies in this big mansion that once belonged to a coal baron. [Laughter] So, that was not good. I left there and got into professional meeting planning and sales at hotels and conventional centers, until I decided one day I truly wanted to work for the birds, and I quit and travelled across the country in my Volvo station wagon with my bike and tent and binoculars and scope, and found out that every single organization and nature center needed someone who could fundraise. So, I became a fundraiser. My first project was, I secured the money to do what was called a high school hawk watch at Cape May Bird Observatory in Cape May, New Jersey. That was amazing, it was great. I taught these kids how to watch birds of prey from the top of their school buildings, got permission so we could look at and document the migration of birds of prey as they flew down through New Jersey, because we really didn't know what path they took. So, we were able to collect all this data. The kids put on a symposium. It was awesome. I got to go to Eilat,

Israel, to the world working group of prey and present my program, and it went internationally. That was super cool. I got to bird with David Sibley and Roger Tory Peterson. Okay, those are, like, the icons of birding. So, I birded with both of them, and it was just an amazing time, because my whole life was surrounded by birds and birders. Cape May is a mecca. So, I got a job with the New Jersey Environmental Federation, fundraising for them. I eventually became their executive director for the statewide organization. It was a coalition of organizations that were fighting to have enforcement of pollution regulations to reduce dumping in the Atlantic Ocean. That was happening from New York City to provide clean water to communities that literally could not even wash their clothes in their tap water, it was so polluted. So, we were an advocacy group. From there, I was recruited to come down to Florida, here to Tallahassee, by the Nature Conservancy. That was in 1991. I told them I would give them two years here, because I was not sixty-five. I did not want to come to a retirement community or state. But, it was a good job opportunity. I really wanted to work for the Nature Conservancy. Their mission was very much in line with what I wanted. So, now, it's thirty years later. I just retired from the Nature Conservancy in 2020, and during that time with the Conservancy, of course, we got involved with marine conservation and estuary protection and oyster restoration, because so much of the wild oyster population has collapsed. I was invited to be part of the Tallahassee Community College Wakulla Environmental Institute Advisory Board, and we thought having an oyster aquaculture program would be something that could help revive the industry. And, from my standpoint, put oysters back in the water using business peoples' money and really getting the bivalves back there doing their bivalvey thing. They're ecosystem engineers. So, we launched the program. Then we

discovered we needed a lot of permits to have oysters in the water in Florida, and we didn't have those permits in Florida. So, I worked to put those permits in place. Worked with the Division of Aquaculture and secured them, and now we have an industry of oyster aquaculture in the state of Florida. I think that's, in a nutshell.

[00:07:35.26]

Annemarie A.: That's great. Well, I'm wondering: why birds? What captivated you about birds?

[00:07:42.26]

Deborah K.: So, okay. I had fallen in love with a man who was an incredible birdwatcher. This was in college. He would get up really early in the morning and leave and go birdwatching. I'm like, "What is wrong with you? We didn't even get in till two o'clock in the morning!" You know, we're wild college students. So, one day, I decided to go bird watching with him. It was at upstate New York. It was one of those perfect May mornings, and there had been a warbler fallout. I saw birds I never, ever knew existed. They were spectacular, and I just was— it just hit me that a) I had missed this my whole life, didn't know it existed, and that these kind of incredible creatures were right in my own neighborhood. So, I started birdwatching daily. It didn't matter what the weather or what the time of year, I was just this hardcore birder and tried to learn everything I could. I would listen to tapes at night of the songs so I could learn the birds' songs. I would travel places just to see certain species. We were on the hotline. We'd be out with friends and all of a sudden, oh, my God, there's a such-and-such up at Montezuma! We better go! [Laughter] You know, and we'd jump in the car and go. So, it then became my . . . I

became a birding tourist, basically. The places I went were always a place that would have a very good bird migratory pattern or population of birds. I had a kind of eureka moment that was the moment I decided to quit my day job and work for the birds. I was a hotel sales convention manager in Pennsylvania, and I had never been to Hawk Mountain. Hawk Mountain is Hawk Mountain sanctuary. It was created in part by Rosalie Edge back in the Depression Era. People were literally going to the mountain. It was a migratory flyway. And they were killing birds of prey by the thousands every day because they thought they were chicken hawks, killing them—that they were bad, that they were vermin. Rosalie saw this, went back to Philadelphia, raised the money to buy the mountain. It became a sanctuary for birds of prey. So, I had heard about it, but I had never been there. It was incredibly close to where my parents and I were born and where my grandparents still lived, so, one day after a business meeting in my dress and heels and trench coat—because it was awesome—I climbed the mountain. I got up there at sunset. [Phone rings] There were some guys standing there, three guys. I'm looking out over the vista and these two redtailed hawks were kettling right there. I went, "Oh, they're redtails!" This guy looks over and he says, "How the hell do you know what they are? You don't even have a pair of binoculars!" You know, and I've got heels on. [Laughter] I've climbed this rocky mountain and I said, "Well, they are redtails, right?" I'm like, "I know they're redtails!" Anyway, he ended up being the curator for Hawk Mountain Sanctuary. He became my mentor. His name is Jim Brett, an incredible friend, a person that believed in me and basically said, "Come back next week, get here on Saturday, spend the whole day." A week later, I tendered my resignation and went to work for the birds.

[00:11:47.17]

Annemarie A.: That's such a good story.

[00:11:53.22]

Deborah K.: Yeah. So Jim and the few guys, at the end of that day, we went down the mountain.

One guy had a Mercedes-Benz that had a bar in the trunk, and we had sat in the parking lot and had a few drinks. Then I drove home to my grandmother's house, actually, and came back that Saturday and watched the migration from the top of the mountain. Jim took me in as an intern. I was actually one of the first interns at Hawk Mountain Sanctuary, and then he started an internship program that is now international. That internship landed me my job at the Cape May Bird Observatory, because I had quit my job— my real job— I was traveling around in my Volvo. I had decided to stop in Salt Lake City because the Raptor Research Conference was happening there. That's a big deal, you know? Everybody got together and talked about the research that was going on, on birds of prey, and particularly because D.D.T. was really decimating the populations of many of the raptors. So, I showed up at the conference, and Jim Brett's sitting in front of me. He turns around and he says, "Do you know where Phoebe is?" Phoebe was the new intern. I said, "No, I haven't seen her." Well, her flight had been delayed, so Jim handed me a stack of slides. You know, this was back before PowerPoint. And said, "You're on at eight o'clock in the morning to talk about the Hawk Mountain Sanctuary internship." So, I stayed awake and I put together a presentation, and at eight o'clock in the morning, spoke in front of six hundred people. I got off the stage and this man walked

up to me and said, "I want you to come work for me at the Cape May Bird Observatory." That started my birding career. His name was Pete Dunn. He was the director of the Cape May Bird Observatory. He and I were like oil and water, but we really respected each other. [Laughter] He was an amazing bird watcher, and David Sibley was there at Cape May during this whole year that I was there and was starting to do his drawings. He was, oh, my God, what a birdwatcher! He was this young kid, and he could literally see a fall warbler flying past you and he would know exactly what it was. God, he was amazing. He is amazing. So, anyway, David is legacy now.

[00:14:29.27]

Annemarie A.: Yeah.

[00:14:31.06]

Deborah K.: An incredible legacy.

[00:14:34.11]

Annemarie A.: Yeah. There was actually an exhibition of his drawings at the University of Mississippi's museum a couple of months ago. So, that's great.

[00:14:44.25]

Deborah K.: He is phenomenal. While we were there, Pete Dunn created the World Series of Birding, which now goes on every year. But it was the first year. Well, the year when I was working there. So, that's how we got Roger Tory Peterson to come to the first World

Series of Birding, and that's twenty-four hours of birding within the state of lines of state of New Jersey. Of course, you got pledges for how many birds you would see. Roger Tory Peterson was on the lead team to do the World Series of Birding that ended Cape May. That was pretty cool. He came early and stayed later with his wife, Virginia, who is lovely. We got to bird with him.

[00:15:34.19]

Annemarie A.: That's nice! What year did you start at Cape May?

[00:15:39.27]

Deborah K.: At Cape May was . . . I think it was [19]81. I'd actually have to go back and look at my resume. I think it was [19]81. It was [19]91 when I came here to Florida for the Nature Conservancy. I'm pretty sure it was that, because I think it was [19]84 or [19]85 when I started working for the New Jersey Environmental Federation, something like that.

[00:16:10.29]

Annemarie A.: Cool.

[00:16:13.02]

Deborah K.: I'm old.

[00:16:14.28]

Annemarie A.: Yeah, definitely not. I've seen you out in the water flipping cages. [Laughter]

You are not.

[00:16:20.16]

Deborah K.: I lived a lot of life, you know. I've been around.

[00:16:27.16]

Annemarie A.: Yeah. Well, is there anything you haven't talked about from your early life before Florida that you'd like to mention?

[00:16:38.19]

Deborah K.: Ah . . .

[00:16:42.03]

Annemarie A.: I'm curious about, maybe, what role did nature or just outside play in your childhood?

[00:16:48.29]

Deborah K.: So, when I was growing up in Pennsylvania, we went camping. We would go to those historic places like Williamsburg, Virginia and travel around as tourists and camping. My father was a hunter and a fisher, but I never was really that interested in nature until I became a birdwatcher, until I went to college. The people that I found as friends, they're still great friends. We just had a reunion last—yeah! Anyway, they were

outdoorsy people. I was introduced to hiking and I started backpacking a lot on my own, even, week-long backpacking trips and camping a lot. It just . . . nature was so important to me in terms of not just therapy and the beauty of it and being out, but the challenge of finding the birds and knowing the birds and understanding the birds and why do they do what they do, how do they nest, how do they mate, where do they migrate to? All of that stuff just became so interesting to me. And habitat that they lived in. And then seeing the destruction of the habitat and what was happening to—and still happening to so many of our bird species—just, it made me definitely say, "I need to go work for the birds." And working for the Nature Conservancy has allowed me to do that, has given me a voice, has given me position. It's given me a passion, even though my positions in Nature Conservancy were raising money to purchase conservation lands or lobbying for new policies and federal funding for conservation. It just has to happen. We have to protect these natural systems. We depend upon them. So, nature has become my passion. It's just critical. It's critical to our survival. And the fact that people . . . and I think about, as an oyster farmer or anyone who works and lives off the land, it's like, "We have got to protect this water for everyone, but my oysters will not survive if this water's degraded." So, I'm a real advocate for what's happening to our uplands and to our waterways and to our aquifers. It's just all so interrelated. The whole thing started with one day of birdwatching, but it's become so much deeper.

[00:19:42.23]

Annemarie A.: Yeah, that's beautiful. I was wondering if you could kind of bring us into Florida. What was your first kind of—you talked about, "I don't want to live in a retirement state." [Laughter] What was your first . . .

[00:20:02.04]

Deborah K.: Okay, I'll tell you my interview. Literally, I'm being recruited, and I'm like, "Ugh, God! No! I'm not going to move to Florida!" Because my image of Florida was a retirement community. So, they asked me to come down for an interview and to spend a few days. It happened to be Labor Day Weekend of 1991. I landed at the airport and they said, "Just go to the car rental place. There will be a packet of information there. And pick up your car." Well, the packet of information included, basically, a tour, a self-guided tour for me to go from one natural area to another. And to meet up with people that were currently working for the Nature Conservancy at preserves and to birdwatch and to hike around. Now, it's August, right? It's Labor Day. Actually, it was early September, and it's hot. [Laughter] I was just amazed at what I was seeing. I mean, these places they hand-picked to take me to. One of the places was, there's a program in Florida that, at the time, was called Preservation 2000. The very first property was having a chain-link cutting of the acquisition of an addition to the Oscar Scherer State Forest. I was there with all the officials and everybody, and then I met with a couple county commissioners and such. But most of the time, I was just, like, being shown these beautiful places in Florida. I was just amazed. Of course, there were great birds that I didn't normally see. I was just loving it. So, at the end of the five days, the guy said, "Well, let's have a meeting." I finally met about my job. [Laughter] And decided to

accept it. So, it was kind of a little bit of love at first sight with Florida. I was able to purchase a home on a lake outside of Tallahassee, and I could swim in that lake every day. It had a little four-foot alligator, but he and I had a truce. It was a beautiful place, and I just really settled in and loved it. And my job was so inspiring. Just the fact that I did county land acquisition referendums, so I went around to counties and we'd form a political action committee and put a voter referendum on the ballot to tax themselves to raise money to buy conservation lands that would be matched by Preservation 2000. So, we're raising millions and millions of public funding to do conservation action in the state of Florida. It took me to some pretty wild places and met a lot of very cool people who cared about this state. And were amazing people. I've been so fortunate to be able to work with them and work with the Nature Conservancy. So, it's been a great career.

[00:23:21.08]

Annemarie A.: For sure. So, did your job take you all over the state or just in the Tallahassee area?

[00:23:25.05]

Deborah K.: No, I went all over. Literally down to Key West all the way to Pensacola to Jacksonville. So, I ran the capital campaign, the first statewide capital campaign held by the Nature Conservancy, and we raised forty-two million dollars in three years. That was pretty awesome. By doing that, I met with a lot of the trustees who were amazing fundraisers for us, and a lot of major donors around the state. Got to see places we wanted to preserve and places we had protected. That really took me a lot of different

places, as did the land acquisition referendums, took me into different counties to work in those counties. So, it was good. Then I did some lobbying work, both on the federal and state level, and so I was up in Washington occasionally and then around, talking to different congressional representatives. I've pretty much been all around the state. There's a couple counties I haven't hit, but a lot of them, I have.

[00:24:33.27]

Annemarie A.: I bet. What a job!

[00:24:32.04]

Deborah K.: Yeah. And when I would travel someplace, you know, I'd try to say, "Okay, I'm going to take a couple hours and stop at this place." And see what it's like, so that I could see the different habitats in Florida. That's what's amazing about Florida. It's incredibly diverse. I think people think of it as either the beaches or some singular entity, but it's very, very diverse and has high biodiversity in this state. Has very rare and imperiled species in this state. So, going to the different nature preserves and Nature Conservancy preserves, I got to see all that.

[00:25:17.16]

Annemarie A.: That's great. Yeah. Well, let's talk a little bit about oysters. Take me to the moment or the time when you thought, when you started thinking about oysters as . . . I guess a means of . . . environmental . . . let me re-say this. Take me back to the moment when you started thinking about oysters, I guess, putting oysters back in the bay.

[00:25:55.16]

Deborah K.: So, more than anything, it probably started when the Nature Conservancy started thinking about oyster reef restoration. Of course, I had been following, from the very first year that I came to Florida, the water wars for the Apalachicola River had been going on and the decline of the wild oyster population had been happening in Apalachicola Bay. When the Conservancy decided to, as I call it, get their feet wet and get off of just land acquisition and land protection but move into estuaries and bays and marine environments, one of the first things everyone says is, "You need to have the keystone species." You've got to have the foundational species for that. That's the oyster. The process to restore an oyster reef, in my opinion, is just so slow and costly and it would take forever to really put together a major restoration plan and get shell back in and get spat back in and really restore any of our oyster reefs. Then, of course, you don't know if they're going to survive because of climate change and different water temperatures and pathogens and things that are happening. They haven't all been that successful, but some of them have been, and the ones that are, are really doing a great job. But it just seemed like it was a lengthy, lengthy process. So, when the Wakulla Environment Institute and Advisory Board, when we were approached with, "What about oyster aquaculture?" To me it just seemed like a eureka moment. "Yeah, let's get oysters in the water!" The permit process would be one permit for the state. We had to change the general programmatic permit with the Army Corps of Engineers that had to be approved by the National Marine Fisheries to use the water column to do aquaculture. There had been a permit in place so that clammers had been clamming on the bottom six inches. So, for me, it just seemed

like, "Wow, if we could do this and still continue restoration efforts—because those are important as well—we would be accelerating the bay health and the ecology of the bay." So, that was really a big part of it. I was grateful that I had had some connections with the agencies and was able to move the permits along a little bit faster. They told me it was going to take, like, five years; I got it done in a year. Not going to stop till it's done. Now, there's what, seven hundred oyster farmers out there in state of Florida? They've all put hundreds of thousands of oysters in the water every year, again, and again, and again. They're filtering and they're creating habitat and they're just doing their little oyster thing. And providing an incredible, sustainable food source! That's the other arm of this, is that our food . . . our food cultivation processes and harvesting oysters, wild oysters versus farming them, it just makes more sense to be able to have a sustainable food source. That you're not taking from the wild; you're giving back to the wild, in fact, to feed our populations. Oysters are such an amazing food. I mean, they're just healthy for you and filled with vitamins and minerals and zinc and magnesium and calcium. I mean, Vitamin C in oysters, that one blew me away. I just didn't think about oysters being a source of Vitamin C, but they are. [Laughter] So, we've got this healthy product that can make a big difference in our food supply.

[00:30:11.03]

Annemarie A.: For sure. What year was that, that you got those permits?

[00:30:16.09]

Deborah K.: So, it was 2015 when we secured the permits. We had to have the aquaculture use zones surveyed and marked, and then we were able to put oysters in the water.

[00:30:31.23]

Annemarie A.: Gotcha. Well, I feel like it's a far cry from getting this permit and helping these folks farm and then making the decision to farm yourself. Could you talk about making that decision?

[00:30:45.04]

Deborah K.: That was kind of a sales pitch from Bob Ballard, the director of the Wakulla Environmental Institute, because none of us had done it. Nobody had done it here in the state of Florida. So, Bob was, "Oh, this is going to be so cool! You just need to . . . You know, it's not a bunch of work, you just go out and put the oysters in, they do their things, you take care of them a couple times a week." So, it sounded like the perfect job or, I don't know, activity. My husband was a water guy. Now, I'm a mountain girl. I was never really tuned into the water that much, but Jack was. So, I thought, "Oh, this will be cool, for me and Jack to get into this together. We'll just take care of them and have a small oyster farm." So, they picked the type of equipment that the Wakulla environmental students were going to get. I got very involved in the class at the time. They nominated me to be president of the class, and that was kind of . . . I was just committed to it, to making sure it could be successful. Said, "Well, I put all this blood and energy into it, I might as well become an oyster farmer myself." So, I was very excited about it, and so first, the school got oysters. We were all working somewhat as a team to raise these

oysters and get some experience doing that. Then, when the leases were— we were doing that on a clam lease, and when we were able to secure all the permits and get our own leases, I moved over to my own lease. My husband took his boat out with my hundred thousand personal babies, and we came back and he said, "Get your own boat." I went, "What?" He said, "Get your own boat. My motto is: inside work, no heavy lifting." Of course, oyster farming is outside work and tons of heavy lifting, so I said, "I can't just walk away! I've dedicated a year to getting to this point, I've got these young oysters now." So, I was in. That was it. I was there. It's a serious commitment. You cannot ignore the babies or you'll pay for it with growth of biofouling on the oyster shell or your equipment will be breaking. You have to constantly be keeping up with things. So, it is much more of a commitment than what we were sold and believed it to be at the beginning. But it has its real benefits.

[00:33:43.29]

Annemarie A.: For sure. So, I wanted to talk about kind of the inner workings of your work, but before that, for people who might be listening to this interview, you and I both—well, you every day, get to go out, and I got to spend some time with you there, and it was amazing. I wonder if you would kind of introduce us to the bay, tell us the place that you farm oysters and kind of describe it.

[00:34:12.08]

Deborah K.: Okay. So, I am farming in Oyster Bay, which is located south of Tallahassee in the Gulf of Mexico. It's part of the larger Apalachee Bay system. About eighty-five percent

of the shoreline of Oyster Bay is protected by the St. Marks National Wildlife Refuge, so when you look out when you ride your boat out into the bay, you look and you don't see a lot of houses. There's a small community called Oyster Bay and then there's a small community called Shell Point. You can see portions of Shell Point. But it's very protected and really beautiful. There's a couple barrier islands out there, three that I can see and that get washed over during big storms and hurricanes, so they have no high vegetation or trees on them. The water depth, it ranges from, at low, low tide maybe a foot. [Laughter] At low, low tide in the wintertime to, at a high tide during the summer months, maybe nine, ten feet deep. It's kind of . . . you can see the spring water popping, you know, boiling up in the bay at certain times. When it's real calm, you can actually see where the aquifers are releasing that freshwater into the bay. So, it has a beautiful mix of salinity, saltwater, and the freshwater coming into it, which is just a perfect habitat for the oysters to grow. What else about it? It's dynamic. It kind of curves around. I can see, sometimes, storms coming in and the storms will be practically on three sides of me, and sometimes even four, where you're just stuck in the middle of a storm. Of course, they blow over, too, but a lot of them stay right onshore. So, we'll see that. Many days when I'm out there, I'll see prescribed fires happening in the St. Marks National Wildlife Refuge. They manage the forest there with fire, and so we'll see that. When I first went out into Oyster Bay to look at the bay before the survey poles were up or anything, it seemed like a marine desert. I mean, we just . . . we were looking on the bottom, we were trying to see any fish; we just saw nothing. Now, it is just teeming with fish and crabs and shrimp and birds and it's phenomenal how much life the oyster farms have brought into this bay. So, it's pretty alive.

[00:37:04.26]

Annemarie A.: That's so great. Well, walk me through a typical day of work for you on the water.

[00:37:11.29]

Deborah K.: So, my typical day . . . now that I'm retired . . . [Laughter] I'll look at when to start my day depending on the weather. So, everything is weather-dependent for me. I have two boats, one which I can use myself on a very windy day, and then one that just has a top floor to it, where I have equipment. That one's just really difficult to manage on a very high wind day. So, I choose which boat I'm going to use, which also determines what kind of work I'm going to do. The bigger boat has a tumbler on it, which I've put the oysters into that tumbler, and it sorts them by size and also helps shape the oyster as it grows. So, load equipment onto the boat, head out in the canal out to the bay. It's a short drive to my lease. I pull up at my floating cages. I use predominantly oyster grow cages. They're made in New Brunswick, Canada. I'm enjoying that equipment. I literally pull the cages up onto hooks that are on the side of my boat, remove the bags that have the oysters in them. They're molded plastic bags, and dump those oysters into the tumbler to have it tumble. The tumbler's eight feet long. It's made by a local company that got involved in doing this, the Shell Game. They tumble through that tumbler, come out small, medium, and mark it at the end, bag them up, and put them back on the lease. I sort where they go on the lease so that I know kind of what age group is happening or what size group and where I can harvest next for market oysters. My work is to keep the

density in the bag low, try to keep it at half or less. When I start out filling the bag, I'll fill it at a quarter. They grow very, very fast in the summertime. It feels almost like a race to keep up with keeping the bags, bag density, right. Once a week, I flip all of the cages up into the air so the oysters are in the air, and that desiccates them. That will basically kill any small organism that has landed on the oyster shell like a barnacle or a wild oyster spat that would affect the appearance of the oyster. It doesn't do anything to the taste of the oyster or the quality of the meat inside, but we want a really clean, beautiful oyster. So, that basically keeps them that way. Then the next day—so, that has to be a sequential day. It can't be more than twenty-four hours. And, in the summertime, even less than twenty-four hours. So, you have to time the weather and when you flip and how that's going to happen. That's pretty hard, to do all of them. Sometimes, in the winter when the tide's really, really low, I can do that from the water and will do that. Then sometimes, the weather's just never right and you have to do it from the water swimming because I won't be able to touch at high tide. In my lease, I can't touch. But that's a very, very important weekly activity that just has to happen to create a premium oyster. Keeping the densities low, sorting by size, and flipping the cages. It's pretty repetitive. [Laughter]

[00:41:01.24]

Annemarie A.: That's great. I'm wondering, let's see. I also want to talk a little bit about just moving through the life cycle of the oyster. Could you talk about, I mean, you've talked about your daily process, which touches on all those things, but could you talk about the life cycle of what size oyster do you get all the way to harvesting them? If that makes sense.

[00:41:30.24]

Deborah K.: So, I was really happy you were able to be there. I've named this new batch of oysters the Mothers. [Laughter] I've named them the Mothers because they came close to Mothers Day. I name all my oyster batches as they come in by some significant date that happened around when I put them on my farm. So, I purchase oysters—seed—from a certified hatchery. Typically, I'm purchasing what's called a triploid oyster, and it's a sterile oyster that's produced in the hatchery by breeding a tetraploid oyster with a diploid oyster, which is a wild oyster, and then you come up with a sterile oyster. The sterile oysters tend to have less disease, they grow a little faster, they're meatier, they don't reproduce. So, you have a meaty oyster all year long that you can eat all year long. I buy—you can buy them at different sizes, and you pay for them according to what size seed you're buying. I typically buy an oyster that retains on a six-millimeter screen. So, it's at least six millimeters and size, and usually, they're pretty uniform when you buy them. You buy them by the thousand, and they come in these white knit bags. So, when I get them, I'll put them into a very small millimeter that goes out in the oyster grow cages, and for the first two weeks of their life out there, I'm not going to flip them. I'm going to let them just get settled in to my bay, my salinity, check on them, read them a story, maybe. [Laughter] Anyway, they will—depending on what time they get planted, what time of year and what the water temperature is determines whether they're going to be a slow grower. So, for instance, the seed that I got in November of last year really did not grow very much over the winter. You could see growth, but it wasn't exponential. I imagine these seeds that we planted on Tuesday, I imagine, in two weeks, they may—or

three weeks—might have doubled because the water is warming up so fast. So, those I'll just continually expand from the one cage that they're in now and up to probably a hundred cages that they'll be in as they mature and go to market size.

[00:44:07.04]

Annemarie A.: That's great.

[00:44:09.00]

Deborah K.: Was that a good answer to that question?

[00:44:12.10]

Annemarie A.: That was a great answer, yeah. Yeah, I'm interested in this idea of this spat.

What hatcheries do you buy from, typically?

[00:44:21.29]

Deborah K.: So, I buy from a couple different hatcheries. One, to support them, and two, to get my foot in the door. The Bay Shellfish Company that's down south of St. Pete, Curtis Hemmel is one. The new Apalachicola Oyster Company, which opened in Apalachicola a few years ago, is another. The Pensacola Oyster Company, that's over in Pensacola. And the Double D Company, which is over in Mobile, are the ones that I have purchased from. I must buy my seed from a west coast, a Florida west coast or Gulf of Mexico hatchery. There is a disease over in the Atlantic that affects the oysters that we don't want to bring over here, so we cannot buy seed from anything over on the Atlantic coast.

Hatcheries are just getting established over here on the west coast and in the Gulf of Mexico, so we've a seed shortage, essentially. They've had some difficulty producing these triploid oysters and getting enough of them for all the new oyster farmers that are out there that want to be growing triploids. They still can produce diploids a little bit easier; those are very similar to the—wild oysters produced in a hatchery. That's important, because we're not out there taking wild spat from the water to grow a commercial operation. One oyster can produce a million spat or more, depending on the age of the oyster, and those are what we're using. So, we're really adding these oysters to the environment rather than taking something that might be grown in the wild, if it wasn't eaten by something, and bringing that into the bay.

[00:46:14.01]

Annemarie A.: That's fascinating. Well—I'm sorry, were you going to say something?

[00:46:19.24]

Deborah K.: Hm-mm. I'm going to take a drink, my throat.

[00:46:29.19]

Annemarie A.: Okay. I want to talk a little bit, too, about, we were talking about maybe environmental issues in general. It might not be past this, but we were also talking about Hurricane Michael and what it did to Oyster Bay and your work. Could you kind of describe that?

[00:46:46.16]

Deborah K.: God. You know, the first year I had oysters out on my own lease, on Memorial Day weekend, this tropical storm came in and I had some of my oysters in a different kind of equipment. Oh, my God, it just ransacked the whole lease. Things were gone; just literally ripped off the line. Bags were gone and my oysters were gone and the lines were all tangled. It was like this spaghetti mixture out there. It was just this absolute nightmare, and it was just a tropical storm. I thought, "Oh, my God, how are we going to survive this?" I worked and changed some of my equipment and how I did things, but every year—most years, there's been one year that last year we did not have a major storm in 2020. We had some smaller storms that did some damage, but not a Michael like in [20]19. So, Michael was scary, because it looked like it wasn't going to come towards us. Then, all of a sudden, it shifted and it was going to hit us. Everyone was out in bad conditions trying to sink their cages. That's one of the precautions we take. The oyster grow equipment has two pontoons, and then it has caps on the end of the pontoons, and so you take the caps off, fill them—literally—sink your cage, put the caps back on so silt from the bottom doesn't get in those cages, and your oysters are down at the bottom. Then you just go back and take your boat to some high place and pray and wait till that storm ends. Then there's usually several days before the bay calms down enough that you can even get out and see whether or not you have anything left. Then it takes . . . it's an interesting thing. It's like your oysters don't all die on that day of the hurricane. It's, like, maybe ten days or fourteen days later, you'll start seeing mortality, that they just got banged around too much or the salinity in the water got so low that they were stressed from that and they start dying. What we've seen is different mortality rates between the

very young oysters and the very old oysters that are out on your lease. Your equipment could be ripped out, like if you lose an anchor, then the whole line is just flying around wherever it's going to be wanting to go, tangled in with other things. So, raising your cages and untangling the lines is a real effort. But that's what you do. And then hope that the oysters have survived. So, we saw varied mortality rates after Michael; different farms. Frankly, it didn't seem like there was rhyme or reason to it, because you'd have a farmer—two farmers next to each other using the same equipment, maybe both of them had sunk their cages, and one of them lost a bunch of oysters and the other one didn't. Or one left their cages up and their oysters survived and the other guy that left his cages up—you know, it just didn't seem like there was a consistent, "This is how we have to deal with a hurricane." So, it's something I think need to be studied a little bit more, in how we can protect our crop and our equipment. I mean, I do know that sinking your cage definitely helps you save your equipment. But there's this massive search for equipment once the hurricane's over. People will go up into grasslands, the marshes, and try to find what was pulled off and blown away, and sometimes you never find it.

[00:50:48.16]

Annemarie A.: That's crazy.

[00:50:50.21]

Deborah K.: The state requires us to label our equipment, so we all have tags—or most of us have tags—on our equipment with our name and phone number. But there's also people

who steal the equipment, even if it does have a tag on it. So, you lose equipment to that, as well.

[00:51:10.19]

Annemarie A.: That makes sense.

[00:51:13.06]

Deborah K.: Yeah.

[00:51:14.19]

Annemarie A.: I'm wondering if you could kind of talk about maybe the challenges or maybe some, like, pleasant surprises that you've had in this journey?

[00:51:26.08]

Deborah K.: Hm. I think I've been most challenged . . . oh, God, there's so many challenges now. [Laughter] There's so many challenges. Being an entrepreneur is a challenge in itself, no matter what kind of business you would get in. But being an entrepreneur in a highly-regulated industry is also another one. That's pretty interesting and pretty demanding. I've been surprised at my own capacity. There have been a couple times where I thought, "Oh, this is just so crazy. It's so hard and there are so many variables and so many things that we can't control. Not just the weather, but so many." You know, COVID and how it affected all of us. There's just so many things out of our control, and yet you have to learn how to maneuver around them. So, I've been surprised that I've

been able to endure through all of it, and particularly when I was still working at the Nature Conservancy. So, I really had an incredible schedule that was quite demanding, and it's a little bit easier and nicer now that I don't have a full-time job, but I also spend more time out on the water myself, whereas I did have some part-time help that would spend more when I was working for the Conservancy. But marketing, I don't know—I don't know how to answer this. What are the surprises? Totally surprised at myself. I really am. I never dreamed of working on the water; I never dreamed of being a commercial fisherman or oyster woman or having any kind of an occupation like this. Then the part that probably feels most comfortable to me is being an advocate for the oyster and oyster farming and protection of our bays and estuaries. That part is natural for me. Everything else is new. Everything else. Driving a boat! I never drove a boat before I became Oyster Mom. I never shucked an oyster before I became Oyster Mom. [Laughter] I didn't even eat many oysters. So, it's all been new, every single aspect of it. I love being out there at dawn and at dusk, those are just incredible times out on the bay, or right when a storm's approaching. So, when you're working in the weather and you're on the water, it's hypnotic some days. It's really scary some other days. I just feel quite alive when I'm out there. You can't rest on your laurels.

[00:54:45.28]

Annemarie A.: I bet.

[00:54:47.19]

Deborah K.: Mh-mm.

[00:54:50.20]

Annemarie A.: That's beautiful. I think maybe we could talk a little bit about your marketing and selling and processing, and then . . .

[00:54:58.26]

Deborah K.: Okay. [Laughter]

[00:54:59.17]

Annemarie A.: Had you talking for a long time.

[00:55:03.12]

Deborah K.: So, when I thought about becoming Oyster Mom and still working my job, I thought, "Well, what I'll do is, I'll focus on getting people to have oysters again in their homes." Instead of being a wholesaler of oysters, I'd like people to be able to get oysters again, particularly in this area, because we were an oyster community with Apalachicola oysters coming in plentiful all the time. People were popping down their tailgates, shucking oysters on the back of their tailgate in their driveway or out in the woods or wherever. That kind of had stopped. So, I really wanted to be able to provide an oyster directly to the public. At first, I started out that I was not a processor, and so I had to sell to a processor. When I had market-ready oysters, there were no processors in this area, so I drove my oysters to Apalachicola and I sold them to two different processing operations there. Then they sold them as Apalachicola oysters. That was fine, except for I had to

take a day off of work, it's a big trip, two hours and fifteen minutes from Tallahassee. You know, it just was a lot. A lot. I could take four or six thousand oysters at a time, but it still was quite a commitment of my time away from the Nature Conservancy. So, I decided I should become my own processor. We're in this space, right here. This belongs to a very dear friend of mine and my husband's. They said they had extra space, so the state came and approved it and inspected it and I put in my refrigerator and lighting and hot water and bathroom and all of this other stuff we had to do to make it meet the state standards. I started selling oysters myself, which allowed me flexibility and allowed me to start selling directly to the Tallahassee resident, which has been a blast. I love meeting people and I meet all kinds of people, and they are regular customers and come back again and again. So, I have that. I've started selling at farmer's markets as well. I do all my marketing myself through networking and word of mouth and social media. Website design, that was—oh, my God, that was hell. [Laughter] Thank God for people who know how to do those things. But anyway, that's all been new to me, as well. But I think I'm putting together—it keeps me busy, let's put it that way. You know, when I'm not on the water, I'm definitely at my computer or on my phone doing social media, doing marketing, calling somebody, working on getting more seed, getting my boat fixed. There's always something to do, even when I'm not on the water. But the selling to the public has been a blast. I've really enjoyed it. I think people are appreciating my oysters. You saw it today! I'm walking into a restaurant, and somebody goes, "Hey, Mom!" You know, because I'm Oyster Mom. [Laughter]

[00:58:33.29]

Annemarie A.: It's so great.

[00:58:36.02]

Deborah K.: It's fun.

[00:58:37.27]

Annemarie A.: I'm wondering if maybe, could you tell me what you hope to see for either the future of Oyster Mom or just the future of oyster aquaculture in Apalachee Bay?

[00:58:50.04]

Deborah K.: So, I've been thinking about the future of the region. The oyster aquaculture in the region. And of course I'd like to see it grow, and I'd like to see our production go up to the point where we could literally market this region as an oyster source. You know, the Apalachicola oyster was very well-known. It was one bay. But now, we have several different bays, all in this Apalachee Bay system, that we could be distributing to the northern cities and the inland cities as this Apalachee Bay oyster. There's difference in our taste from bay to bay, but we could collectively market the Apalachee Bay oyster and, I think, really get a lot of bang for our buck as a collective going into the United States or even internationally. You know, we can ship internationally, as well. So, I see that. I mean, that would be an incredible vision for this region and for all the oyster farmers in this region. I think it's doable. I mean, when you think about other parts of the country, there's individual bays and individual farmers, but there are also the Chesapeake Bay oyster. Yes, there are different farmers in there, but you know it's a Chesapeake

oyster. I think we can do that and become a global—because this is a really good oyster. It'll stand up against any oyster in the world as an incredible, delicate flavor. The complexity of the flavor of a Gulf oyster and the West Florida oyster is just amazing. I think we could make a name for ourselves.

[01:00:50.01]

Annemarie A.: That's great. Well, is there anything that we have not talked about that you would like to share?

[01:00:57.00]

Deborah K.: My God! I don't know! [Laughter] You've asked some very good questions. You make me think. I don't know, I think I'm at the end. [Laughter]

[01:01:17.00]

Annemarie A.: Well, thank you so much for talking with me. I really appreciate it.

[01:01:20.27]

Deborah K.: It's been fun.

[*End of interview*]